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COLMAN'S RURAL WORLD

DEVOTED TO AGRICULTURE HORTICULTURE HORSES CATTLE SHEEP SWINE ETC.

OLDEST AGRICULTURAL AND LIVE STOCK JOURNAL IN THE MISSISSIPPI VALLEY

Sixty-Eighth Year.

ST. LOUIS, MO., DECEMBER 20, 1915.

Volume LXVIII. No. 37.

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WHAT OUR READERS THINK & DO

PROSPERITY IN SOUTHWEST MISSOURI.

Editor, Rural World:—Some of your readers may be interested in knowing what is going on in Southwest Missouri. On October 1, I saw two Germans sowing wheat, and two more ready. I do not remember a day from October 1 to December 1, that I did not see someone sowing wheat. All volunteer wheat that I have examined is full of eggs. A greater effort than usual has been made to destroy all volunteer wheat before sowing. On oat fields, the volunteer oats are still flourishing and ought to be so they could be pastured closer than they are likely to be.

The week ending December 4 saw a large number of hogs killed for home use. I heard of cholera in adjoining townships. I have not been where there was any, and would discount some things I heard in that direction.

Most of the silos have been filled, corn gathered and a large amount of spring plowing done. On some fields I saw them dragging the stalks down, while in others they were depending on the team and a chain to cover them. In very few fields were the stalks standing straight, so they are easier than ordinary, to start right when the chain tackles them. I do not remember seeing a field where any large amount of stalks are being burned. In one where corn had been fed on the ground an acre or more was so matted it would have been out of the question to have handled them in any other way, while in other parts of the field the team and chain were leaving a nice surface for the disks next spring.

Since the advent of the Thomas smoothing harrow into southern Illinois about 35 years ago, I do not remember any implement that has gained as fast as the disk. One farmer who had just filled his silo with corn and soy beans said: "I thought I had things about right with corn and stock peas, but look at the nitrogen balls on these roots," as he held up the soy bean plants.

TELL OTHERS WHAT YOU KNOW ABOUT RAISING POULTRY.

Readers of the *Rural World* are requested to help make our issue of January 20 a big poultry special. We want letters from experience in the care and management of poultry from the hatch to the hatchet. But each letter need not necessarily cover the whole subject. Select any one or more of the following topics and tell how you proceed to get the best results:

1. Your Favorite Breed.
2. Mating Breeding Stock.
3. Hatching with Hens.
4. Hatching with Incubators.
5. Artificial Brooders.
6. Feeding Young Chicks.
7. Baby Chick Business.
8. Winter Egg Production.
9. Making Poultry Pay.
10. Treatment of Disease.
11. Marketing Poultry.

Other topics also will come to mind. Discuss either chickens, turkeys, ducks or geese. Short letters are preferred to long ones. If you are not in the habit of writing for publication, do not be shy on that account. Send the facts and they will be published. Mail the letters by January 1.

Let us have a big round-up of ideas on poultry! Who will be the first to respond?

THE EDITOR.

One farmer said: "When I had the red cow we made slop for butter, now with the Jersey we can mold it the year round. And to kill for my own family use, give me a Jersey; there is more fat, better distributed. What do I care how the city chap finds it in cutting out the high priced cuts."

Today there are more chickens killed and eaten on the farms of southwest Missouri than were raised here 35 years ago.—L. E. Clement, Missouri.

FROM TEXAS COUNTY, MISSOURI.

Editor, Rural World:—It has been a fine autumn to carry on all kinds of farm work. The fall wheat greens the fields and is doing nicely. Most of the corn is still in the shock; it is a fair yield for an extra wet season. Potatoes did well and are a big yield. Most vegetables and fruits made a fair crop.

However, times are quiet and close here at present. There seems to be a general scarcity of money to do business with and keep things moving. Horses and mules, of which there is a surplus here, are in poor demand. The market is the army buyers', and they will have nothing but the best at very moderate prices, sometimes buying not more than two or three out of a score or more collected for their inspection.

Most of the fat hogs were sold off the range last month at 5 and 5½ cents per hundred. They could not be held longer for higher prices on account of the acorns failing early this year.

Fat cows sold off the grass this fall for \$50 and \$60 per head. Cattle are scarce. Farmers here are turning their attention, mainly to cattle and are giving up sheep on account of wolves and dogs.—George Kavanagh, Missouri.

NOTES FROM "EGYPT."

Editor, Rural World:—We have had an unusually fine fall and we needed it, for there never was so much to do. We had a good crop of red top and this must be threshed and nearly all baled. Then there was nearly 1,000 tons of timothy shipped out of our township, and more than 100,000 bushels of apples. This, with a small corn crop, made some work.

Corn on low land was a failure. Corn is selling among farmers at 60 cents. Some raised the best crop for years, and some failed entirely.

Timothy hay sells at \$10, and apples probably average \$2 a barrel; so, we received quite a snug sum from these two items.

The demand for horses and mules is good, but at low prices compared with recent years. We do not happen to have any of Mr. Clement's kind that sell for several thousand dollars, and he forgets to mention that these are the very rare exceptions.

The tractor fever has not reached us yet, and we hear that only in a few cases are they satisfactory.

Our county farmers' Institute was almost a failure on account of small attendance. The few present were up-to-date men who take the farm journals and bulletins.

Mr. Lyon and Mrs. Mardis seem to have "holed up," but we hope they will come out before "ground hog day." A Merry Christmas to everybody!—"Agricola," Illinois.

NOTES FROM KENTUCKY.

Editor, Rural World:—We have had one of the nicest and most prolonged falls that I can remember. For the whole month of October we had lovely weather and much fall work has been done. There was an abundance of excellent pasture for all kinds of stock. We had nice ripe tomatoes from the garden the 14th of November, but at last the tomatoes are killed down. I never have known tomatoes to hold out this long before.

We are enjoying some very nice turnips for over a month now. The weather was fine for turnips. I sowed a nice patch in my garden where I had my early potatoes. I also had some apples picked the 15th of November.

Our cows have been eating silage for about a week now. The largest milk check for one month we ever had was

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MANY AUTOS GIVEN

I have given away 40 autos in the past few years. Not one of the winners has paid for the car. Their names and addresses will be furnished on request. It's worth your investigation. Send for my free booklet "Auto Dreams" today. Use the coupon. Address

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We always feed ours some corn before butchering to harden the meat and lard.

I often wonder when I am reading Mr. J. M. Miller's good letters, if he is a relative of the Mr. Samuel Miller that used to write such fine letters long ago. Wishing the editor and all of the readers of the *Rural World* a Merry Christmas and a Happy New Year.—Sarah L. Spears, Arkansas.

Be sure that boards, wire, or burlap are placed on the southwest side of apple and smooth-bark trees to prevent sunscald during the winter.

COLMAN'S RURAL WORLD

Vol. 68. No. 37.

ST. LOUIS, MO., DECEMBER 20, 1915.

SEMI-MONTHLY.

The Farmer's Highway to Success

Is the Straight and Narrow Path of Industry and Purpose---Uncertain Ways and Byways Do Not Reach the Goal---Consult The Compass of Certainty!

By R. B. Rushing, Illinois

THE business vocation that a man has is not simply his means of getting a living; it is his part of the world's work. Each vocation in town and country constitute a part of the world's machinery. When labor, thought and honesty are linked together in every branch of our industrial life, we shall have less friction in the machinery and more cash in our pockets.

There are many avenues that lead to success in farming, and each farmer should travel the one best suited to his inclination. To succeed he must be thoughtful, persistent, ambitious and, above all, honest. He must understand that the thoughts gained by experience are the mainsprings of his business.

To Be or Not to Be in Debt.

The American farmer is a better business man today than he was 20 years ago, but he has many lessons to learn. The average farmer generally must commence his business with a limited amount of capital; hence he should not be superstitious about debts.

Do not understand me to teach or practice the credit system as being absolutely essential to the farmer's highway to success, as debts greatly differ. To go in debt for productive property is one thing and to go in debt for unproductive property is another thing.

To buy land for less than it is worth, to buy stock to feed on the farm, to make needed improvements, to hire labor, to save that which is going to waste, to buy improved machinery that saves expense--these things are business debts; debts that when rightly managed are a source of profit.

But for the farmer to run in debt for fast horses, for stock that he does not understand, for an enterprise over which he has no control, for costly building, and last but not least, for costly vehicles, musical instruments, furniture and wearing apparel that his family may move in the "social circle," which regards those things only--these are the eggs from which are hatched disappointment and dishonor; these are the debts that darken the home with financial despair.

Debt for Business Only.

When debt is used, let it be in a straightforward business way. Store debts and floating debts are a nuisance. The farmer who forces a merchant to carry him generally gets a rough ride. The farmer has no business to force a man with whom he deals to carry him. He can borrow when they make a business of loaning, and clear up his scattering accounts and redeem his paper when due, at the proper time. Failure (no matter what the cause), to redeem paper when due, will bring on more trouble than most anything else. Please paste that in your hat, my farm friend!

Big Farm Made to Pay.

A significant instance of what proper methods of farm management can accomplish is afforded by a certain 500-acre farm in central Michigan. For 10 years this farm failed to pay interest on the capital invested. One year after the owners had been induced to make certain radical changes the farm paid all the expenses of operation and returned them 5 per cent on an investment of \$60,000. The changes which accomplished this financial revolution were as follows:

1. Four-horse machinery was substituted for two-horse.

2. The unprofitable cows in the dairy herd were weeded out and sold and the money received for them invested in better stock.

3. A silo was built.

4. The foreman was allowed, in addition to his salary, 10 per cent of the net income from the farm. The expenses of operating the farm, but not the interest on the capital, were deducted from the income before the foreman received his percentage.

It was this last suggestion which met with the most opposition from the owners of the farm, but when it was pointed out to them that for every dollar the foreman got under such an arrangement they would get \$9 they yielded.

A man can contract one debt which never can be paid—a debt which is incurred when his judgment goes into bankruptcy, and he goes into any business in opposition to his own taste.

It is hard enough to win success in any calling when the whole bent of a man's mind is in the direction of his business; it is doubly hard when the mental drift is the wrong way. Be what nature intended you for, and you will succeed; be anything else, and you will be worse than nothing.

The farmer who grows a crop should estimate the cost as carefully as an architect, who plans a building, count its cost; by so doing he may know just what he is making. Crops should be grown not as the result of impulse, but of careful calculation. The farmer will then know just where his money comes from at the end of the year; if he is financially sick at the end of the year, he can tell what parts brought on the disease. The man who keeps a cash account thinks twice before he spends his money, and if he is a successful farmer he will spend thoughtfully what he gets laboriously.

Take Interest in Politics.

The obligations of citizenship should make every farmer active in politics, not for the good of his clan alone, but for the good of the whole country. It is not good citizenship for the farmer to stay away from the polls for the lack of time, and then spend his time bewailing the result of the election. Some men say they do not like to meddle in politics because the atmosphere of political life is full of moral poison. Will the political atmosphere become purer by the absence of good men?

The farmer who is a good citizen will never be oppressed with that nightmare of nonsense which pictures all tillers of the soil as carrying the burdens of the world. The good citizen respects the rights and virtues of all classes and does not magnify those of his own.

Success on a Homestead Won by Woman Enthusiast

By James A. Patterson, Colorado.

A PAINTER and decorator of Denver, Charles Robinson, working by the day, rented a flat for which he paid \$20 a month for himself and family consisting of wife, daughter and two sons. Although having steady work most of the time, his wages barely sufficed to cover household expenses and gave little prospect for accumulating anything ahead. Scanning the daily paper one evening, he chanced to see an item referring to certain lands in Montana, soon to be opened for settlement. He read the paragraph aloud to his wife. They then discussed the matter of how they might arrange to take up a homestead, but were unable to see clearly any plan by which they could secure money enough to buy the necessary outfit. Next morning at the breakfast table, Mrs. Robinson made the following suggestion:

"Charley, I've been thinking that perhaps I could help in some way I might take Avery (14-year-old son) along, do some work and live on the place for seven months during the summer, as required by the regulations. I think that we could in this way test the land with small expense the first year by raising vegetables. If we can take advantage of this opening, we may get a plot of land that will serve us well as a homestead in our old age."

"We'll think it over; we have a month yet before the date set for the opening," replied Robinson. "In the meantime, some idea may float along that will help us to solve the problem."

"Charley, you know as things are going now we cannot get anything ahead. There'll come a time within the next 10 years when you cannot expect to find steady work competing with younger men in the painting business. It would then be very comforting to know that we had a home of our own, for which we did not have to pay rent in our declining years."

"I'll try to get away for a week to look over the land, and if it measures up as well as reports seem to indicate, we'll find some way to come in on the deal," ejaculated Robinson as he left the house.

Do You Remember?

The following suggestion may be of use to some reader of this paper. Most people read an article in an agricultural or horticultural journal and trust to memory to retain the gist of it, only to find when the need for its use arises, that some essential portion of it has escaped their memory.

For many years I have been in the habit of marking any desirable item that I read in the papers, subsequently cutting them out and pasting them in old books retained for that purpose, indexing them at the same time under their respective headings. The possession of such items of information available at need has assisted me in many an emergency.—W. Harrison.

The successful farmer will never call anything good enough which can be better. He will occasionally be looking and working for better crops, better soil, better stock, better buildings and a stronger sense of justice. He should love his vocation; he should carry into it enthusiasm backed by faith; he should be broad in charity, strong in friendly sympathy for others; he should be loyal to himself, loyal to his family, loyal to his country, and above all loyal to the truth.

The nation of ours, with its laws, its mills, its factories, its institutions, its beautiful cities, its forests, its millions of well-cultivated acres, its beautiful herds, its happy homes, its wealth of matter and mind, is a living monument to the business ability of those men who, in an early day, came here to make homes for themselves in what was then the western wilderness.

Three weeks later in October, 1914, Robinson got away from work; took a trip to a hamlet named Big Sandy, Chouteau county, 80 miles from Great Falls. On the ground early, he made a good selection of 320 acres. Railroad fare, hotel bills, and land office fees on this trip swallowed up \$135, which they could ill afford at the time. However, Robinson consoled himself with the adage: "Nothing ventured, nothing won."

Robinson returned to work. Meantime, Mrs. Robinson had been thinking, dreaming, planning until "Home, sweet home" became deeply etched in her mind. One evening at the upper table she broached the subject again in this manner: "I've talked a plan over with Avery. I think that he and I can go there in the spring (1915) do what we can in the way of raising vegetables and make enough improvements to comply with the land office regulations. I've written to Uncle Henry Newburg, who has promised to lend us \$300 with which to buy an outfit. You must hold your job in order to provide for living expenses until we see results coming from the land; we cannot hope for large crops or much returns in the first year."

Robinson tried to dissuade his wife by saying that she was not adapted for that kind of life; that the plan as outlined entailed too much privation for one not accustomed to the work; but she waived aside his objections with this rejoinder:

"I know the plan involves some work and probably some sacrifice of comforts for the first year, but if we can thus secure a home I shall feel amply repaid for the inconvenience."

It was then settled that Robinson, who was earning \$4.50 a day as painter, should retain his job; while Avery, who received only \$9 a week as an elevator pilot, should accompany his mother to the ranch for the summer. A small house-tent, a span of horses, harness, wagon, plow, and a supply of seeds were bought and taken to the place along with a housekeeping outfit. Beryl (16-year-old

(Continued on Page 4.)

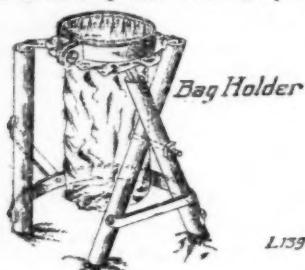
Recent Inventions of Interest to Agriculture

By C. J. Lynde.

THIS series of articles will appear in Colman's Rural World regularly throughout the fall and winter. Six inventions are here described and six different ones will be described in each issue that follows. Thus, the reader will be given six new ideas in farm mechanics twice a month. Keep the series for reference.

Bag Holder.

Any farmer will understand the accompanying cut without much explanation. The three braced legs have holes in the top into which fit prongs



running out from an iron hoop. The top of the bag is placed over this hoop, and the outside hoop is placed over it. By screwing up the nut on the bolt of the outside band the bag is held firmly in place.

Checking Device for Runaways.

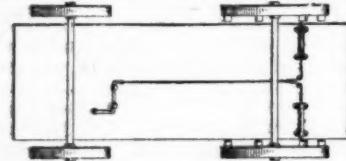
The blinders on this device are so hinged and controlled by a checking device as to make it possible for the



driver to control a horse, if it starts to run, by depriving it of its straight ahead vision, or to stop it in the same way, in the absence of the driver, by arranging the checking device so it will be pulled by the turn of the wheel.

Vehicle Lock.

The following cut shows the bottom of a milk or delivery wagon provided with a contrivance which makes it impossible to move the wagon during the absence of the driver. Attached to one end of the driver's seat and passing



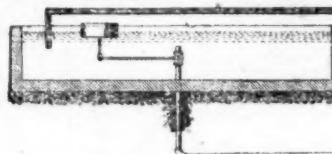
through the bottom of the wagon is a rod pivoted to a cranked shaft, hung in bearings. This shaft is connected by cables to bolts sliding in housings between the rear wheels. These bolts are forced outward by springs, and when released fit into stops attached to the wheels and lock the wagon. The driver's weight on the seat draws the bolts back releases the wheels.

Watering Trough.

The idea of this invention is to provide an automatically fed trough that will be protected against freezing. The cut shows a trough especially adapted for hogs. It is sunk almost entirely in the ground and is fed by a pipe from below. This pipe is controlled by a float valve.

The trough has a cover, slightly raised above the water level and short-

er than the trough. The space between the end of the cover and the wall of the trough provides enough room for the animals. The water con-

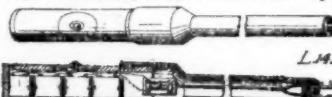


Watering Trough L142

sistantly coming through the buried pipe and the air space beneath the cover prevent freezing. The device is claimed to have proved successful in a temperature of 20 degrees below zero.

Electric Animal Prod.

Dry batteries make the use of electricity possible in many novel appliances. The following cut shows an animal prod which it is claimed will not injure the flesh or hide. The first cut shows the prod as it looks when completed. The larger end is the handle which contains the batteries, coil, wires and button, as shown in the second cut. The small end has two metal terminals a short distance apart.

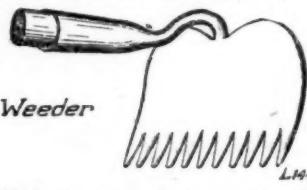


Electric Animal-Prod

In use, the terminals are placed against the horse and the button is pressed. The horse then receives an electric shock which is much more effective than an ordinary prod.

Weeder.

The blade of this hoe is cut into V-shaped notches, very sharp at the edges, but with the ends of the teeth dulled. It will be observed, too, that



the blade is somewhat curved. The sharp edges cut weeds, which are grasped and held in the notches. The convex curving of the blade gives additional purchase, and enables the user to do his work with a minimum amount of stooping.

STRAW AND MANURE SHOULD BE SAVED ON EVERY FARM.

The liquid portion of manure constitutes an important part of it. It may be of interest to note that over half the nitrogen and nearly half of the potash produced by horses is in the liquid excrement. Over half the nitrogen from cows is found in the liquid while there is five times as much potash in the liquid as in the solid excrement. Liquid manure from the pig contains one-fifth of the nitrogen and one-third of the potash. Sheep liquid manure contains one-half the nitrogen and two-thirds of the potash.

In general it may be said that the liquid manure is as valuable as the solids when we think of the total plant food, but when we consider the availability, we find that that found in the liquid is immediately available, while that in the solid becomes so only slowly. While the nutrients in the liquid are easily available they are very easily lost, and that is one of the big problems we run against in conserving the manure while it is accumulating.

How can we best save it? The first thing to do is to see that the floor of the stable is water tight. Quit using dirt floors. Then catch the liquid. This can be best done by use of an absorbent. Fortunately we have at hand

a cheap and an efficient absorbent. We want to keep the animals clean and this absorbent is ideal for that purpose also. I refer, of course, to straw. Straw will absorb several times its own weight. In addition to this, it contains valuable fertilizing elements in itself. It contains one-third of the nitrogen, one-fourth of the phosphorus, and three-fourths of the potassium of the wheat crop. With the combination, then, we are returning a considerable amount of fertility to the soil. Certainly there is no profit in burning our straw stacks. That is a practice of 50 years ago, and has no place on the modern farm. It is worth figuring pretty closely whether it is even wise to bale and sell the straw, or sell it to a more progressive neighbor to use as fertilizer on the farm across the road. —Geo. W. Graves, Idaho Experiment Station.

SUCCESS ON HOMESTEAD WON BY WOMAN.

(Continued from Page 3.)

daughter) was to keep house for her father and younger brother, Gail who was still attending school in the city. They arrived at the ranch first week in April. Work was begun at once, breaking up about 10 acres, five acres of which was sown in oats and the remainder planted in a variety of vegetables.

On July first, the crops showed up fairly well as first year products. Then Avery was disabled for a month by a kick from a horse which became fractured after being stung by a bunch of hornets. Under the doctor's advice he remained in bed for two weeks until his broken rib knitted, then did light work and cooked the meals until fully recovered. This mishap was very discouraging because of coming at a time when his services were most needed.

However, Mrs. Robinson donned a hickory shirt and a pair of trousers, and began the work of harvesting the oats and other things as they ripened. This was a crucial period which tested her strength severely; but through it all she held the vision—a home of her own as the final result. This dominant thought served to keep her hopeful and buoyant; enabled her to overcome obstacles and the extra work which now developed upon her. Swinging an old-fashioned cradle into a field of oats was a new experience for her and taxed her strength to the limit. By alternately cutting for an hour, then binding the grain as a relief she got the oats safely into the shock.

On October 25 the grain was threshed, and together with corn, potatoes and cabbages raised, was sold in the nearby hamlet. The tent, horses and implements were given over to a neighbor to care for until spring. The man asked for no pay and assumed no responsibility for the horses, merely agreeing to let them run the range with his own. Mrs. Robinson then returned to Denver for the winter.

While the outcome of the season as a whole was not profitable, the experience gained will prove valuable in future work. Mrs. Robinson is now planning to return to the ranch in March, 1916. Avery found a job in Denver for the winter, but has arranged to accompany his mother to the ranch next spring. He expresses the opinion that he will be able to handle a plow more skilfully, not exhausting himself and the horses as much as he did during the past season.

Figuring up the results of the past summer, Charles Robinson tells intimate friends that the deal which secured the land was a wise move, that his wife is entitled to the credit, and that he has drawn plans for a barn and five-room cottage to be built on the ranch next summer. In case luck favors them, and the plans for 1916 carry through as outlined, he intends to give up his city work in the spring of 1917, and move his entire family to the ranch where they will engage in farming on a larger scope, putting as much of the land under cultivation as time and resources will permit.

It does not cost much to have the home grounds on the farm attractive.

Upland soils which are acid could be made more productive by the proper application of lime.

Nuggets and Notions

In Agriculture
By "Observer."

If you put up a bulletin at your farm gate advertising anything for sale, have it neat with correct lettering and spelling. Slipshod work here provokes ridicule. How does this look: "Aigs and buter fer sail." Yet, I have seen it, not "done a purpose."

It is said that while the average crop is made in 120 days it does its feeding in the first 60 days; hence its food should be accessible, available and easily appropriated.

If the starch freezes out of the garments on the clothesline put a little salt into it.

The egg plant may make a success even in a dry season. In one case, where there was no rain from May to August, a fair crop was grown.

We import much potash but export two-thirds as much phosphates; and our beds of phosphate rock are inexhaustible. One cannot be substituted for the other in plant economy.

The Blower's blackberry is said to be hardy down to 20 degrees below zero and to be larger than either the Snyder or Eldorado—in fact, the largest hardy blackberry known.

The fact that the wooden piles driven in the great Salt Lake of Utah 40 years ago are still sound suggests that brine may be used as a preservative for fence posts.

Always tie a horse with his head away from the wind in winter.

Dr. Wiley, the great health chemist of our land, says he was brought up on skim-milk, mush and sorghum molasses. The ration is hard to beat.

While the Elberta is the best peach for the market it is certainly deficient in many qualities that make for flavor. The bitterness about the seed should be eliminated by selection, if possible. Perhaps the "J. H. Hale" has this outlook.

Keep all fruit trees low and stocky. C. A. Green asserts that wood veneer is the cheapest protection for trees from rodents, and is all-sufficient.

Never pile up manure or mulch directly against the tree trunk. Both mice and fire may thus be avoided.

Do not forget that a bare field in winter suffers; so prepare your summer crops to prevent this condition.

Take two panes of glass. Place on one a damp cloth. Lay on this any sprouted plant, its roots washed clean. Let the plant project beyond the edge but the roots rest on the cloth. Place the other pane over the roots. Have something (piece of match?) to keep the upper pane from pressing hard on the roots. Now watch daily the relative growth of roots and plant. A little ammonia in the water moistening the cloth may act as a stimulant. It will amuse and instruct the children.

It is said that Indiana reports that 20 per cent of her pigs die before weaning time, and they do not have cholera either. It must be what the negro calls "jes' negleeness." It prevails elsewhere.

STORE SEED CORN PROPERLY.

"Seed corn, to germinate well next spring, should receive careful attention regarding its storing during the winter months," says W. E. Hanger, field crop specialist, Ohio State University. "It must have free circulation of air at ordinary temperatures to allow excessive moisture to evaporate and to prevent any fungous growth or chemical changes in the kernel," he states.

Mr. Hanger recommends hanging rows of 10 ears each tied together with strings from the rafters of a well ventilated building or shed. Other methods used are: Placing the ears on wire hammocks suspended in well ventilated places, and stored in racks in the attic. Seed corn should be selected as early as possible and never allowed to be stored with the crib corn. A little attention to the seed now may save a poor stand because of low viability at planting time.

COLMAN'S RURAL WORLD

A. B. CUTTING, Editor.

1915		DECEMBER					1915	
Sun	Mon	Tues	Wed	Thurs	Fri	Sat		
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THE STABILITY OF AMERICAN AGRICULTURE.

That the stability of the farming business is steadily increasing was emphasized in an interesting way by Senator James W. Wadsworth, Jr. of New York state, in an address on the above topic delivered at the annual meeting of the association of Life Insurance Presidents held recently in New York City. The senator said, in part:

"Nearly all of us can remember that oftentimes, we will say, 15 or 20 years ago, our attention was arrested by news dispatches from the farming districts to the effect that the corn crop, or the wheat crop, or the hay crop was a failure, due to unseasonable weather of various kinds, generally to excessive drought; the story of the old cattlemen was replete with instances of terrific losses on the range from scarcity of grass and water or from severity of winter weather. In other words, the hazards of farming and stock-raising in those days were great and many men lost all they had; the consequent depression was felt in all industries. Surely, there has been a noticeable decrease in recent years in these stories of failure and loss.

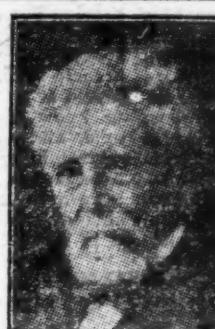
"There is a very clear reason for this highly important change. The American farmer has seen the danger of placing all his eggs in one basket. He no longer, to the same extent, devotes his entire acreage to the raising of one crop. He has learned to diversify and thus to insure himself against a total failure in any one season. This diversification and crop rotation commenced more than a generation ago in the agricultural regions of the east and has slowly but surely extended through most of the country of the Middle West and is now marching down into the Southern states.

"The man in Kansas who used to devote nearly all his land to the raising of wheat and corn has planted in recent years a large acreage in alfalfa—that wonderful plant which has done more to insure against disaster than any other plant known to man—and he is also paying a good deal of attention to dairying, the poultry business and to fruit raising. The methods of cultivating the semi-arid regions have also vastly improved and as a result, on land which 10 years ago was considered useless for crop raising, there is now produced an enormous tonnage of kafr corn, sorghum, milo maize and feterita, plants which have been found to possess drought-resisting powers. Thousands upon thousands of range cows are now saved, where 10 or 15 years ago they would have perished without this feed. It is from this diversification more than from anything else that the farms of the East, of the Mississippi Valley and the ranches of the cattle country are all now reasonably assured against staggering loss;

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NORMAN J. COLMAN,
First U. S. Secretary of
Agriculture.

diversification is fast stabilizing agriculture.

"Other and very important elements have helped in this improvement. More and more do men appreciate the necessity of maintaining the fertility of the soil and that its fertility may be best and most economically maintained by the feeding of live-stock on the farm. I know many farmers at home who feed every scrap of hay, whether it be clover or alfalfa, every corn stalk, every shred of fodder of no matter what kind, to their own cattle or sheep. The fertilizing materials thus produced go back on the land.

"One of the important branches of agriculture in states like Illinois, Iowa, Nebraska, Kansas and Missouri has been the fattening of beef cattle brought from the western range states and fed upon corn. While the number of cattle fed in this way has not materially increased in recent years, the cattle available for feeding are scattered more evenly over the farms and therefore more farms are being maintained in their fertility.

"In addition to diversification and a more general use of live stock, there is one more instrument which is rapidly coming into use and which has accomplished notable results in helping to stabilize the farming business. I refer to the silo. In the dairy sections of

the East the silo has long ceased to be a novelty. Viewed at first with distrust, it proved its value many years ago and over a great section of the country east of the Mississippi river it has been accepted for many years as an effective instrument for the preservation of feed.

To my mind, its value lies not only in keeping fresh a certain number of tons of feed throughout the winter and thereby supplying a ration of consistent quality, but also in its ability, when properly used, to save a feed crop from entire destruction. A crop approaching maturity and threatened with destruction from drought can be quickly cut and put into the silo with its strength but very little impaired.

Several times in recent years I have seen a whole crop saved by that method. The number of silos that are being erected in the West and Southwest is enormous."

To sum up the senator's remarks in a few words, the stability of our agriculture is increasing because the American farmer of today knows how to farm better than he, or his father, did a generation ago. And he is still learning and practicing methods that make for a better agriculture. The senator's review of conditions and progress contains a lesson for all farmers who still remain in the ranks of the one-croppers.

40 Years Ago • 20 Years Ago In Colman's Rural World

(Issue of Dec. 18, 1875.)

Michigan has a girl who it is claimed husked 63 bushels of corn in one day.

A lady of St. Genevieve has a blooming rose bush said to be over 100 years old.

An Indiana boy had a curiosity to know if a horse could feel the prick of a pin the same as he could. The horse felt it, and the boy felt something else.

(Issue of Dec. 25, 1875.)

Foot-and-mouth disease has broken out among the cattle in Middlesex county, Ontario, Canada.

The honey interests of the United States has been largely promoted by women. Mrs. E. S. Tupper of Iowa is the leading writer on bee-keeping in the country.

Colman's Rural World is mailed postpaid to any address in the United States or Island possessions for fifty cents per year or three years for one dollar. All subscriptions payable in advance. Remit by draft, registered letter, post office or express money order. In changing address give old and new addresses.

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DIVERSIFIED FARMING INFLUENCES HEALTH IN THE HOME.

Much public interest has been excited by the recent announcement of the United States public health service, to the effect that the development of the disease known as pellagra in human beings depends on faulty diet. Among the suggestions of the public health service for the modification of diet to prevent the development of pellagra are a number of items which emphasize the importance of the campaign of the department and the state agricultural colleges to increase the production of food supplies on the farm, especially to bring about a home supply of meat, eggs, milk and butter. Among these specific recommendations are:

(a) The ownership of a milk cow; an increase of milk production for home consumption.

(b) Poultry and egg raising for home consumption.

(c) Stock raising.

(d) Diversification and cultivation of food crops.

These four specifications give an added argument for the campaign of live stock raising and farm diversification, which has been especially urged, particularly for the South. It is quite reasonable to presume, therefore, that the production of the family meat supply at the farm home will not only decrease considerably the expense of the family table and add somewhat directly to the family revenue as well, but will have a profound effect on the health and well-being of the members of the family.

MEASURES OF FARM EFFICIENCY.

There are certain factors on which the success of a farm business usually depends. From these it is usually possible to determine not only the good points in a system of farming but also its deficiencies. The latter being known, the method of improving the system becomes evident.

On a great majority of farms success is primarily dependent on three important factors. These are (1) the size of a farm business; (2) the yields of the crops and the returns per animal, representing the quality of the farm business; and (3) the diversity of the business. Of course many other things have their influence, but the farmer whose business is efficient in these three respects is generally successful. Those farms that are excellent in none of these respects almost universally fail. Those deficient in one or two may succeed, but their chances of success are greatly lessened. It is best to be efficient in all three.

The dairy farmer not only studies how to feed his cow but how to feed his land. He is not a soil robber, as he realizes that the farmer who reduces the fertility of his land robs without reason, since he steals from himself. Give the land its due!

Give Roots of Orchard Trees Plenty of Room

UPON the care given an orchard, the fruit crop of that orchard depends. The trees must be pruned, and sprayed if perfect fruit is wanted and cultivated in order to increase the size of the fruit. It is the proper cultivating of an orchard that will be taken up in this article.

Let us illustrate the value of good cultivation by considering the culture of corn in the field. Plant corn and never cultivate it and you will not get a crop. What is it that prevents getting a crop? Some will say the weeds. That is true, but if there were no weeds to choke the growing corn, then what? Well, corn grows mainly in the top soil and when that soil gets caked and dried out plant growth usually stops. As corn grows mainly in the top soil, we cultivate that soil first to keep the weeds down, and secondly to loosen up the top soil so as to conserve moisture and to make it easy for the corn to make proper root growth.

Tree Roots Should Go Deep.

Now take the orchard into consideration. We find the trees have roots as well as corn has. The systems of growth, however, are different; one grows in the top soil while the other finds its way down into the subsoil. This subsoil is many times so very tough that roots make slow growth in it. This will retard the growth of the entire tree and lessen the chances for a good crop of fruit. In order to give an orchard proper care the subsoil must never be overlooked.

Cultivating the top soil in an orchard helps a great deal. However, where the trees are old cultivating the top soil does not remedy the tough condition of the subsoil. In order to make the required top growth the trees roots must be able to extend at will. Plowing deep in an old orchard is liable to cause damage to the roots, so something else must be used.

Loosen Subsoil With Dynamite.

The following narrative is from the experience of the writer: Having some 20 per cent dynamite left over from a tree planting job it was decided to use it around some old trees. There was enough dynamite for about 40 holes. The holes were made three feet deep and in the central space between four trees. This gave at least 16 trees the benefit of four shots apiece. Each cartridge was primed at both ends by inserting into each end a cap with a three-foot fuse attached. These caps were securely tied with cord and then the cartridge cut in half. Each hole received a half cartridge.

This charge was at first lightly tamped and, after there was about six inches of moist earth on top of the charge, the tamping was done a little harder. A sawed off broom handle was used to do the tamping. After the hole had been entirely filled and securely tamped the charges were exploded, the fuse being ignited with a match. This was done during the hot summer months when the ground was dry.

This orchard subsoiling gave results at harvest time. While the fruit from the entire orchard, numbering 288 trees, was more or less wormy, the fruit from the trees that received the benefit of the blasting 16 in number was much larger. If this orchard had the proper care otherwise, the fruit of those 16 trees no doubt would have been perfect.—F. A. Kuhn, New York State.

PROTECT YOUNG APPLE TREES FROM MICE AND RABBITS.

Protect newly planted apple trees against winter girdling by mice and rabbits. A tree thoroughly or even partly girdled has little or no chance to live without expert bridge grafting which is not especially easy, at least for the man who is unaccustomed to it. Perhaps the best protection is obtained by using a thin wooden veneer wrapper which has been soaked to keep it from breaking, then bent around the tree, and held in place by a single wire about the middle. The wire stays in place better if passed through a hole near the outer edge of

the veneer wrapper. The wrapper should be pushed down into the earth so that mice cannot burrow under it, or they may be shut out by heaping soil up around the bottom of the case and tramping it firm. Coiled screen wire may be used in much the same way but it is more expensive. The veneer wrappers do not usually cost more than half or three-quarters of a cent apiece, and can be secured from any orchard supply house.

Bunches of long grass, or split corn stalks may give good protection against rabbits but fail to keep mice from doing harm. Newspapers or tar paper wrapped around the tree trunk have been successfully used by many orchardists.

Paint and washes do not give good results as the rabbits sometimes seem to attack the washed trees more than the untreated ones.

Damage from mice should be avoided by the removal of all loose, trashy material from the neighborhood of the base of the tree trunk. If the ground has been fall plowed, the under furrow slice furnishes good nesting places for mice and the nearby trees are likely to suffer, but if the ground near the tree is clean and well compacted, little damage will be done by these rodents. —C. C. Wiggans, Missouri College of Agriculture.

PROMISING NEW INSECTICIDE—ARSENATE OF CALCIUM.

As a result of extensive tests during 1912, 1913 and 1914 with different insecticides, the entomologists of the United States Department of Agriculture have found that calcium arsenate, a new insecticide, gives very promising results in the control of certain insects that do damage by chewing on fruit trees. Among the chewing insects against which the arsenate of calcium proved effective, in laboratory and field tests conducted at Benton Harbor, Mich., are the codling moth, the fall webworm, the tent caterpillar and the tussock moth. The details of the various experiments are published in Department Bulletin No. 278, "Miscellaneous Insecticide Investigations."

In these tests the effects of arsenate of calcium, both alone and combined with lime-sulphur solution, were tested in comparison with arsenate of lead alone and in combination with lime-sulphur. The arsenate of calcium, as was the arsenate of lead, was used at the rate of two pounds to each 50 gallons of water. In all the experiments the arsenate of calcium gave very satisfactory results in killing the larvae without burning the foliage. In a number of cases its killing action was somewhat slower than, but compared favorably with, the arsenate of lead. Since it can be produced more cheaply than the lead arsenate it would appear to have distinct value, although it has not been sufficiently tested to permit recommending it unreservedly for general use.

Combined With Lime-Sulphur.

Where arsenate of calcium was combined with lime-sulphur it was, as a rule, even more effective as a poisoning agent than when used alone and did not lessen the value of the latter as a fungicide. When these compounds are combined, the amount of foliage consumed by the larvae is less than where the arsenate of calcium is used alone. In tests in 1914 a commercial arsenate of calcium (paste), arsenic oxide 18.82 per cent, with lime-sulphur solution gave very excellent control of the codling moth in comparison with arsenate of lead and with unsprayed plats. Where arsenate of calcium was used 98.79 per cent of the apples were sound; arsenate of lead showed 99.44 per cent of sound apples; while in the unsprayed tests plats only 58.71 per cent of the apples were free from damage.

How to Prepare.

The following will be found to be a convenient way of making home-made arsenate of calcium: Stone lime (90 per cent CaO), 55 pounds; sodium arsenate, fused, (dry powdered) 65 per

cent As2O5, 100 pounds; water, 26 gallons.

Place the stone lime in a wooden container and add a small amount of water, just enough to start slaking. When slaking is well under way pour in the sodium arsenate which should first have been dissolved in hot water. Keep stirring until the lime has thoroughly slaked. Sufficient water should be added from time to time to prevent burning.

The resulting arsenate of calcium should contain about 18 per cent of arsenic oxide. In making this compound it will of course be necessary to know approximately the calcium oxide and arsenic oxide content of the materials employed and to vary the formula accordingly. The by-product is largely sodium hydroxide, which should be decanted if the insecticide is to be used on tender foliage.

INJURY BY ARSENICAL AND LIME-SULPHUR SOLUTIONS.

A number of tests to determine the effects of different arsenicals on the foliage of peach trees and of arsenicals combined with lime-sulphur solution on peach and bean foliage have recently been conducted by the entomologists of the United States Department of Agriculture. The arsenate of lead was used 1 to 50 and 2 to 50 and the arsenate of calcium was used 1 to 50. A number of poisons were combined with lime 2 to 50 and with lime-sulphur 1½ to 50.

Following are the conclusions of the entomologists as published in Department Bulletin 278, "Miscellaneous Insecticide Investigations."

Of the arsenates of lead, the diplumbic form had no burning effect on bean foliage and burned peach foliage very slightly. Arsenate of lead, consisting of a mixture of the diplumbic and triplumbic forms, burned peach foliage slightly, but no injury resulted on bean foliage. The commercial No. 1, consisting of the triplumbic form of arsenate of lead, did not injure peach or bean foliage. The commercial (2) burned the peach so badly that all the leaves were shed and produced moderate burning on the bean, about 25 per cent of the leaves being shed, but no burning where it was combined with lime or lime-sulphur. The commercial produced no burning on bean foliage and very slight burning on peach foliage.

Arsenate of calcium caused about 15 per cent of the leaves to drop on peach, but had no burning effect on bean foliage.

The arsenates of iron, chemically pure and home-made, did not burn either bean or peach foliage.

Arsenate of zinc did not burn bean foliage, but seriously injured peach foliage, causing complete defoliation. The home-made form of arsenate of zinc produced very slight burning on peach and no burning on bean foliage.

Arsenic sulphide and arsenic ter-sulphide produced severe burning in all tests.

Arsenic trioxid burned severely in all cases except when combined with lime, in which cases the burning was slightly less.

Arsenite of lime, home-made, burned the bean foliage moderately when used alone and in combination with lime-sulphur. However, no burning resulted when extra lime was added. The peach foliage was severely burned by this material, causing all the leaves to drop.

Arsenite of zinc, chemically pure, burned severely in all cases except where lime was used, in which case no burning resulted.

Arsenite of zinc powder, commercial, burned moderately on beans ex-

cept where lime was added, in which case no burning resulted. It caused all of the peach leaves to drop.

Paris green produced moderate burning in all the tests on bean foliage and burned all the leaves off the peach.

SUNFLOWERS: AN IMPORTANT AGRICULTURAL CROP.

The sunflower is an important agricultural crop, though it has not been used to any great extent in this country. It is cultivated quite extensively in Russia and used for a variety of purposes. It makes excellent silage, especially when mixed with corn and some legume in about equal parts of each. The seed has an unusually high oil and protein content. On account of the latter its growth rapidly exhausts the nitrogen from the soil and, therefore, if grown successively on land, the soil will require considerable fertilizer. The oil portion does not exhaust the soil since the elements from which oil is made come from the air and water.

The seed is used in the production of oil, which is extracted by compression, and is of value for table use, cooking purposes, and in general the same use as is made of olive oil.

In Russia the seeds of the larger seeded varieties are sold as peanuts are in this country, and eaten raw. The plant has also been used quite extensively in paper manufacture in some of the European countries.

The sunflower should be grown upon soil which is suitable for corn and planted and cultivated about the same as corn, though it will stand a little earlier planting than the latter on account of its greater resistance to frost. It is a crop well worthy of further attention in some portions of this state.

REGARDING NURSERY STOCK.

In answer to the question, "Why do fruit trees live much longer in eastern states than here?" will say, climate and soil. Some fruit trees will live much longer in eastern states than here, but trees here come in bearing comparatively that much sooner. Also some varieties that are profitable east are worthless here.

It is a mistake to buy nursery trees grown in eastern states thinking that they are much longer lived. The nearer home they are grown the better. Also nursery stock grown west will adapt itself better than if grown in the north, east or south. Much have I lost by buying trees and plants from the east.

Fall planted trees should have earth banked up around them about a foot and in early spring leveled around the trees. This answers for the first cultivation.—Jacob Faith, Missouri.

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IMPORTANT RESOLUTIONS ADOPTED BY NATIONAL GRANGE.

At its 49th annual meeting, held recently at Oakland, Cal., the National Grange went emphatically on record in favor of national prohibition and instructed the legislative committee to urge congress to submit a constitutional amendment to prevent the manufacture and sale of intoxicating liquors.

The grange declared against an increase in the army or navy, and for an international police force, arguing that such increase is unnecessary since the strong nations are now so crippling themselves that we will have nothing to fear from their ambition for a long time to come; and that our best security is a wise economic industrial policy that will make a contented people within our borders. The peace committee's report figured that the proposed war and navy expenditure would build 1,000,000 miles of good roadbeds; it also argued that the volunteer soldier always surpasses the regular in national defense. The report maintained that the agitation for increased army and navy expenditure is fomented by interests that profit by such expenditures, and urged that all war munitions should be manufactured only by our federal government.

That the placing of loans on farms and for rural development cannot be safely left to private capital, that the government should supervise and protect farm loans, and that a reduction of the prevailing rate of interest on farm loans is imperative, is the gist of the resolution on this subject.

Rural Credits Resolutions.

Resolved, (1) That after years of investigation and a nation-wide discussion of the subject of farm credit, we see no reason for materially changing the position taken by the national grange at the Manchester and Wilmington sessions, and in accordance with the worthy master's address, we reaffirm the same:

Resolved, (2) That it is the opinion of the national grange that any legislation for the purpose of bettering farm credits is a part of the great national policy of conservation of the food supply, and as such the government of the nation should itself carry out the policy and it cannot safely be delegated to private capital for exploitation and profit;

Resolved, (3) That any farm credit association, which shall receive any privilege by or under federal or state law, should be composed of farmers and not of capitalists of high finance who have, heretofore dominated agricultural credit and created conditions which demand relief;

Resolved, (4) That any farm credit plan which does not include a direct reduction of the "prevailing rates" of interest, as well as a long term of small payment, upon farm mortgages, will not meet agricultural requirements or materially benefit our farmers;

Resolved, (5) That no farm credit law which places in the hands of private capital the power to make interest rates on mortgage bonds, without limitation by federal law, will meet either the needs of agriculture or the just demands of the national grange;

Resolved, (6) That the government of the United States shall lend money at a rate not to exceed 4½ per cent to the farmers upon 30 year farm land mortgages, with such provisions as may be necessary to make the government perfectly safe, with the addition of an amortization charge that will pay the principal in that time, provided, that not more than \$10,000 shall be loaned to any one person and that no person owning more than \$26,000 worth of land shall be entitled to these privileges;

Resolved, (7) That the legislative committee and officers of the grange throughout the country are instructed to insist, on behalf of this body, that more substantial government aid, to steady interest rates and uphold the market for farm mortgage bonds, shall be included in the bill finally passed by congress.

Other Resolutions.

On financial co-operation it was voted that the National Grange disseminate more information on the subject and that the Rochdale system be approved.

On denatured alcohol the grange recommended that careful investigation be made into the laws relating to denatured alcohol with a view to manufacturing products of the farm into such alcohol.

The grange reaffirmed its position on government supervision of the great transportation companies in order "to protect the interests of both producer and consumer against the avaricious greed of transportation companies."

As to the tariff it was thought that the time has come to demand that the juggling of the tariff for political advantage or in the interest of favored industries shall cease, and that future tariff legislation shall be based on ascertained facts and be in the interest of all people and it was voted as the sense of the convention that congress shall at once create and permanently maintain a strictly non-partisan tariff commission to make a full and impartial investigation that shall bring out all the facts, and report the same to congress from time to time, and that in the makeup of said commission agriculture shall be fully and fairly represented thereon.

The grange is in favor of the department of agriculture gathering choice seeds, which are adapted to our climate, and after thoroughly testing and proving their value, distribute, but the present method of distribution is a worthless waste, and money thus expended should be used in channels which would benefit agriculture. The grange endorsed the above statement in the master's address and condemned the present practice of congressional seed distribution.

Concerning government control of public utilities the grange affirmed its belief that constitutional prerogative, justice to our people, the progress and honor of our nation demand that congress take action in accordance with the recommendations of the postal department and acquire all electrical and radio means of communication.

The grange favored the Haugen bill, as revised, in favor of the regulation of the sale of oleomargarine and instructed its legislative committee to assist in securing this needed legislation.

The biennial election of officers resulted as follows: Master, Oliver Wilson, Peoria, Ill.; secretary, C. M. Freeman, Tippecanoe City, Ohio; treasurer, Mrs. Eva S. McDowell, Wellesley, Mass. The 50th anniversary of the organization of the National Grange will be celebrated in 1916 at Washington, D. C.

CONTROL OF THE BAG OR BASKET WORM.

If you would save the arbor vitae, red cedars, maples, and other trees and shrubs, pick off the long brown slender silken cases or cocoons which dangle from their twigs and branches, and burn them. This will destroy the well-known bag or basket worm which is now in the egg stage within the cases, according to T. J. Talbert of the Missouri College of Agriculture. This pest is often a great deal more destructive than canker worms, San Jose scale, and other pests. Each bag or case may contain from 700 to 1,200 eggs which during next May and June will hatch into as many hungry caterpillars.

The bag or basket worm is one of the most common and injurious insect pests in the parks and plantings of the larger cities and towns of Missouri. In many cases, it is doing more harm to shrubbery and shade trees than all other insects combined. If the proper measures of prevention are put into practice, it is, however, one of the easiest insects to control.

A simple way of destroying the pest is to collect the cases or bags during the fall and winter and burn them. If this work is thoroughly done, the eggs of the insects will be destroyed and the pest may be completely stamped out.

Since the caterpillars that hatch from bag-worm eggs are leaf-eaters, they may be destroyed by the use of arsenical poisons. When the worms are small or just emerging from the baglike cases during May and June they may be killed easily by spraying the foliage thoroughly with arsenate of lead paste at the rate of three pounds to 50 gallons of water. This spray

The Wheat Yield Tells the Story of Western Canada's Rapid Progress

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should be applied just as soon as the pest begins to feed in the spring. Later sprays may require more poison. During the summer, sticky bands placed around the trunks of the trees will protect them from the caterpillars which wander at this season.

ANTHRACNOSE OF BEAN.

Bean anthracnose, a fungus-disease common at certain portions of the season upon the wax and green beans, causes spotting of the pods and growing parts. The disease first appears as a small purplish discoloration which later develops into a larger spot with a darkened sunken center bordered by a light-brown ring. Spots may run together, forming irregular sunken areas. During certain stages, a pink mass of spores is formed in the center of each spot. The fungus penetrates through the pod into the bean seeds, the latter often becoming discolored or spotted.

Various control methods can be used. Seed selection is the most important. Seeds should only be used from healthy pods, preferably grown on fields where little disease is present. It is practically impossible to select clean seed, except by taking those from healthy pods. Spraying with bordeaux mixture, 3-3-50 formula, is advised when the disease appears early, and if practicable. Burning of infected material, and rotation of crops is important.

ORCHARD AND GARDEN NOTES.

Cutting of grapes, dogwood, etc., may be made now and stored in sand until spring.

Cover rosebushes in the north with hay or straw and put boards or heavy paper over this to shed water.

The strawberry bed should be covered with straw three or four inches deep. Use straw free from weeds.

Make a final clearing of the garden at this time. It does not pay to harbor weeds and insects for next season.

The Caragana or Siberian Pea Tree makes a good plant for dry sections. There are several varieties, some dwarf, some tall.

As soon as chrysanthemums are through flowering, the flowering stalks should be cut off and if the plant is wanted to propagate from, put in a cool, light place until about March 1, when cuttings may be made and rooted in moist sand. These cuttings may be made as late as May with success.

A few evergreens about the place make it more comfortable, especially if they are on the west or northwest. Besides breaking the wind, their contrast with the snow makes the place more cheerful at this time of year.

A Virginia Creeper vine trained over a fence, porch, or stone wall adds much to the attractiveness of a place, especially in the autumn, when the leaves are highly colored.

Tramp the snow about apple and ornamental trees to prevent mice from working at the base.

A mulch of well-rotted manure on the lawn will hold the snow and give a good stand of grass next year. The manure is unsightly until covered by the snow, but gets results.

Many towns and cities have ravines

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or river banks that are unsightly dumping grounds for all sorts of rubbish. Cleared up and parked, they become an asset to the town. Now is a good time to make plans for this sort of property.

Cut clons of apples for winter root-grafting or to use next spring in top-working. Store in sand or sawdust in such a way as to prevent their drying out or becoming moist enough to grow.

Have you ordered a set of pruning tools? It will soon be time to begin the winter pruning.

Store canna and dahlia roots and gladiolus bulbs in a cool place, covering them with dry sand.

Prepare hotbeds now for growing lettuce and radishes during the winter months.

Be sure that all wire labels are removed from trees when they are planted, or later they will cut the bark, doing serious damage.

It is well to keep a permanent record of one's fruit orchard. This record should show the location, the variety and the date of planting of each tree.

Great improvement has been made in pompon and single chrysanthemums the last few years. Several varieties can be grown in the house if a little care is taken.

In order to keep flowers in water they should have an inch or so of the stem cut off every day. If the stem is hard-wooded, split it about one inch. This will allow the water to pass into the stem more easily.

HORSE BREEDING AND RAISING

HORSES FOR THE WAR—TROTTING HORSES PROFITABLE.

Editor, Rural World:—Under different captions in Colman's Rural World and another St. Louis publication the same week, Prof. E. A. Trowbridge of Columbia, Mo., said: "About half a million horses and mules have been sent to Europe because of the war." If hostilities should stop at once, the number sent would be nearer a million than half a million.

One man in Kansas City stated three months ago that he had handled 80,000 horses and mules for the different allies. I was talking with an intelligent farmer within the week and he said: "I was counting up the other day and I could only think of three besides myself, who had young horses and mules more than they will want for their own use; the farmers are not breeding."

The professor has wasted some hours of valuable time in trying to make the farmers who read understand that half a million horses and mules will make very little difference in future prices while we have 28 to 30 millions left. The 400,000 horses sold were salable horses, because they were what the allies wanted for army uses.

A Lawrence county farmer told me a short time ago: "I live only six miles from Pierce City. I have been breeding to heavy horses until I have not a horse on my place fit to drive to town." Later when an adopted son was killed in a mine a few miles from his home, he drove one of his mares about four miles and left her and borrowed a standard and registered son of Northman, son of Ashland Wilkes, right out of the stud, and finished the trip. The horse reached the mine covered with lather. All he required was a light blanket, thrown over him, and walked a little to cool off and he was ready for more worlds to conquer. This farmer-school teacher has bred all his mares in 1915 to a 1,050 non-standard trotting stallion. He will get a better lot of colts for any purpose than he ever bred before. It is a pity that other intelligent farmers who have gone astray, could not be placed so that they would have to drive a good horse 10 miles in a hurry.

The professor said: "In view of these constantly changing conditions, the business of horse-production offers unusual opportunities to the man who succeeds in meeting market demands successfully. Horses of the draft or high-class saddle type or mules of good size and quality and capable of doing lots of hard work are likely to prove most profitable."

For the benefit of Mr. Trowbridge and of Dr. McCampbell, of Manhattan, Kan., I want to call their attention to some of the happenings of the last month. Curles' Neck Farm bought to use as brood mares Margaret Druiven (5), 2:03 $\frac{1}{4}$, by Peter the Great, for \$7,500; Lettie Lee (7), 2:06 $\frac{3}{4}$, by Moko, \$2,000; Queen Abbess (5), 2:03 $\frac{1}{4}$, by The Abbe, \$2,000. The dam of Lettie Lee was bred and raised in Missouri.

Last week in my effort to place Nancy Hanks, 2:04 in the right position, relative to world's record dams, I spoke of Lou Dillon, the present queen. Curles' Neck sold Expressive Lou (2), 2:15, to Wm. Crawford, New York, for \$3,000, as she was by Atlantic Express that began the season of 1915 with three two-year-olds in the list.

Curles' Neck Farm sold 22 head at an average of \$440, 19 of them weanlings at an average price of \$300. C. E. Dean, of Palatin, Ill., paid \$450 for a brown colt, (weanling) which probably at maturity won't weigh over 1,000 to 1,200 pounds.

In other words Curles' Neck Farm, that presented the Colorado station at Ft. Collins with Wilmering, 2:12 $\frac{1}{4}$, that the government might be found

breeding a class of horses that is tabooed by the live stock professors of Kansas and Missouri, let go of 22 head of their valuable youngsters to get a couple of untried brood mares, and still raised the money to buy an extra brood mare at \$2,000.

James R. Magowan sold five colts and fillies by J. Malcolm Forbes for an average of \$1,730 per head. Brook Farm paid \$3,425 for the yearling, Emma Magowan, by J. Malcolm Forbes.

Give the pessimists all the rope they want; they will hang themselves with a good length halter strap.—L. E. Clement.

EXPERT GIVES HIS METHOD OF JUDGING SADDLE HORSES.

As horse owners and exhibitors have ideas of their own regarding the merits or demerits of a horse and regarding the proper means of judging them, the following announcement made to the exhibitors and riders of saddle horses at the Panama-Pacific Exposition by Charles Elmer Railey, of Lexington, Ky., who judged saddle horses there, may be of interest and may change some opinions. It is well worth reading:

"Personally, I do not think the speed of the show horse need be limited, provided he is not forced to such speed as will cause the performer to hop, pace behind or in any way lose the purity of his gaits.

The majority of riders are prone to play to the gallery, to get the applause of the multitude—in which not one in a thousand knows what the class calls for or whether the horse is performing correctly or incorrectly. They see the horse tearing around the ring at a great rate of speed and it thrills them. They do not see the unsteadiness, the faulty, unbalanced gaits, the pulling and the hogging on the bit. Then, when the judge turns down this champion of the crowd, he is severely criticized. So, after all, the American Saddle Breeders' Association rule of 12 miles an hour is a good one and if adhered to there would be less of incorrect, impure gaits in the five-gaited saddle horse.

However, if any entry comes before me with absolutely pure gaits, he will receive credit for speed, if that speed does not cause a faulty performance.

The American saddle horse is a distinct breed, and has beauty, intelligence, usefulness and similarity of type. While he is useful in various ways, he is primarily a saddle horse, a pleasure horse, a tonic for brain and body. He must have beauty, carry himself in a proud way, must have a light mouth and pure gaits and a certain amount of speed.

Failing in these requisites, you will find that he bores or pulls on the bit, which will make him unsteady, unbalanced, strung out and hop or pace or all. Such a horse will receive no consideration.

I wish to impress on you that the awards will be made absolutely on the performance at the time. If the winner should meet the contenders again I will judge him as though I had never seen him before and he must fairly beat his field again.

Past performances, reputations from press or high prices paid, or the applause of the crowd will have no bearing on my decision.

My usual methods of judging is to allow the exhibitors, when they first come into the ring, to go as they please for a few moments, or until their mounts have settled and are over the excitement of entering the arena. Then a lineup and an individual test.

Your mounts will receive credit for purity of gaits, for speed, for form, for brilliancy, for balance, for lightness of the mouth, for beauty, for manners, for soundness. The saddle horse is not a racing horse. Speed is all right if you can combine it with form and purity of gaits.

You will get a fair deal and I hope you will help me in every way possible."

Harvester Dillon, a weanling bay colt, by The Harvester 2:01, dam Lou Dillon 1:58, recently foaled at Curles' Neck Farm, the Virginia breeding establishment of C. K. G. Billings, is dead.

CARING FOR THE COLT IN WINTER.

As the pastures dry up and cold weather approaches, the question of how to care for the growing colt through the winter confronts the farmer. Many colts will be taken from pasture with a goodly store of fat only to be turned out to a straw pile for feed and shelter, and will come out next spring lighter in weight than they are this fall. On the other hand, not a few colts may be ruined by heavy feeding in stalls, where they cannot take exercise.

The ideal shelter for colts is a tightly built shed, open to the south, where the animals may go in and out at their own pleasure, and where they may have the run of a good big field for exercise. Idle farm horses can best be sheltered in the same way. A dry bed and protection from cold winds, snow and rain is all that is needed.

Two parts of oats (preferably crushed) and one part of bran, make a very suitable feed for growing colts. In cold weather a little corn may be added not to exceed 25 per cent of the ration. If clover or alfalfa is used as half of the roughage ration, no oil meal will be needed, but if the roughage consists of wild hay or corn stover, about 8 per cent of oil meal should be added to the grain ration. Where oats is high in price and barley is plentiful, a ration of crushed barley 60 per cent, bran 30 per cent, and oil meal 10 per cent should give good results.

There is a little danger of overfeeding a colt if it is properly exercised. A colt should receive at least one pound daily for each 100 pounds of live weight, and if out in the cold a little more may be used to advantage.

Growth can be made more rapidly and cheaply during the first year than at any other time, and feed should not be spared at this time.—J. S. Montgomery, University Farm, St. Paul, Minn.

MANY 2:10 TROTTERS NOWADAYS.

Editor, Rural World:—In your review of "Twenty Years Ago," Dec. 5, 1915, we find: "There are but 46 horses that have trotted in 2:10 or better." For the last few years, there have been upwards of 70 added each year. Peter the Great has Peter Volo, 2:04 $\frac{1}{2}$, Volga, 2:07 $\frac{3}{4}$, Miss Stokes, 2:09 $\frac{1}{4}$, and Lady Wanitka, 2:10, records made at two years of age. Lady Wanitka, 2:10, was second to Peter Volo, officially timed in 2:05 $\frac{1}{4}$. Her death the following winter, by fire, is to be lamented. She was the fastest filly yet bred, showing more speed at Columbus than Peter Volo, when she gained on him an open length when she trotted the half in 2:01 $\frac{1}{4}$.—L. E. Clement, Missouri.

HORSES' FEET.

The cavalry branches of most armies pay due attention to the horses' feet. The veterinary officers realize that, if they wish to keep horses sound on their legs, they must see to it that their feet are all right. Persistent inspection, skilful shoeing, careful trimming when necessary—even toes shortened a little when so prescribed—is it all an essential part of the program. And it pays. Good feet will keep a horse going for a long time, and, in the event of a man's life being dependent on the animal's speed and endurance, it is important that he should not be handicapped in that way. Everything ought to be just comme il faut, and it is as well to remember that constant and persistent care and attention are necessary to achieve the object indicated. A little slackness may do a lot of harm. Nor is an ordinary blacksmith less efficient in his work if he performs it occasionally under intelligent direction and supervision. He is excellent, as a rule, and thoroughly conscientious, but nobody is the worse for mental stimulus administered by others.—Live Stock Journal.

Trampfast 2:12 $\frac{1}{4}$, is the first 10-year-old sire to be credited with three trotters in the 2:10 list. All three earned their records this year.

SELDOM SEE

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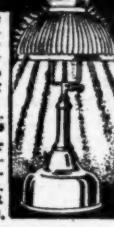
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ABOUT TROTTERS AND PACERS.

The world's record for a yearling trotting filly was made at Lexington, Ky., Oct. 10, by Anselila, by Prince Ansel, dam Ila Moko, by Moko. Anselila trotted a mile in 2:17 $\frac{1}{2}$. She is owned by the Woodland Stock Farm, of Woodland, Cal. The former record was held by Miss Stokes, when she trotted the mile over the same track as a yearling in 2:19 $\frac{1}{4}$, in 1909.

A remarkable trotting performance came off October 9 over the half-mile track at Victor, Mont. The 3:00 class was won in 2:48 $\frac{1}{4}$, 2:46, by Mille Bella, a 19-year-old mare by Mirlo, 20585, dam Maria Bella, by Albert W., 2:20, owned by D. O. Cobb, of Victor. The mare had raised several foals and was used under saddle and to buggy, and had never been hitched to a bike until the day of the race, which was the first time she had ever contended with other horses. She was untrained and had previously trotted an eighth in 20 seconds.—Ex.

In another column, Mr. Clement refers to some of the sales at the Old Glory sale, New York, last month. Among other sales were Expressive Lou, \$3,000; John R. Hal, \$1,350; Buck Watts, \$1,000; Libya, \$1,000; Brother David, \$2,250; Peter Bing, \$1,000; Our Colonel, \$2,350; Caroline, \$1,400; Emma Magowan, \$3,425; Mary Magowan, \$1,550; Leonard, \$1,000; Katharine W., \$1,700; Sad Thoughts, \$1,225, and Clara Scott, \$1,000. Numerous others sold for prices ranging from \$200 upwards. And there were many others that brought extremely low prices, as low as \$35, for animals of the finest blood in the land. The average price at the sale was about \$300.

Most produce can be Eckles Missou is the legume falfa, for the on corn with a maintenance. Bran at a while furnish cents a the prover, or with a definite most supply cents a

CATTLE FOR BEEF AND FOR MILK

HOLSTEIN GIVES 64,957 POUNDS OF MILK IN THREE YEARS.

If you were keeping 47 persons in a boarding house and had only one cow to supply milk and butter, what would you do? If the cow were Carlotta Pontiac, a 12-year-old Holstein bred and owned by the dairy husbandry department of the Missouri College of Agriculture at Columbia and you gave each boarder an amount equal to the per capita consumption of milk and butter in the United States, you would not need to do anything but sell 9,643 pounds of milk every year. That is the amount she produced each of the last three years above the per capita allowance for 47 persons. The per capita consumption is figured, on the calculation of the U. S. Department of Agriculture, as 17.6 pounds of butter a year and one-third of a quart of milk a day.

Six Times Better Than Average.

In three years Carlotta has produced 64,957 pounds of milk and 2,480 pounds of butter. The average Missouri cow would have furnished in that time 10,500 pounds of milk and 420 of butter, about one-sixth as much as Carlotta. At the average price in Columbia of 7½ cents a quart for the milk, Carlotta's product in the three years would be worth \$2,319.90. At 30 cents a pound for the butter and 25 cents 100 pounds for the skim milk, it would be worth \$882.05. The latter return would involve little cost of handling.

Carlotta Pontiac's three-year record perhaps has not been equalled by any other cow in Missouri. She is still producing milk, having given birth to a heifer calf a few weeks ago. However, she is not on test now. The production of Carlotta Pontiac is made possible by her breeding. A record made by her three years ago was broken a year later by her sister.

How She Is Cared For.

Like other cows in the dairy herd at the University, Carlotta eats grain, corn silage, and alfalfa hay. Of the silage and hay she has all she will eat. With the grain she gets cottonseed meal and bran.

Carlotta's home is a large box stall of iron bars with straw for a bed. The only favor that she has which is not shared by other cows in the herd is that her door is fastened with an extra button on the outside. For a time she enjoyed the privilege of lifting the latch of her door and walking out without the permission of her keeper. When the keeper leaves her now, Carlotta knows that he will turn the button and stands resigned to her imprisonment. But let a stranger leave the stall, Carlotta suspects his ignorance of her methods and tries to lift the hatch. Often she is successful.

BALANCED DAIRY RATIONS—PROTEIN MUST BE FED.

Most feeders of dairy cows can produce protein more cheaply than they can buy it, according to Prof. C. H. Eckles of the dairy department of the Missouri College of Agriculture. Wise is the man who has a good supply of legume forage on hand from his alfalfa, clover, cowpeas, or soybean fields, for the dairy cow cannot do her best on corn, timothy hay, or fodder even with good, succulent silage to help maintain summer pasture conditions.

Bran at \$1 per 100 furnishes protein at a cost of about 8½ cents a pound, while cotton seed at \$1.90 per 100 furnishes it at a cost of little over 5 cents a pound. The cost of producing the protein on the farm in alfalfa, clover, or other leguminous crops varies with local conditions so that no such definite figures can be given, but almost any farmer should be able to supply himself at much less than 5 cents a pound. If he has neglected to

do so, however, he must purchase protein in some form to supplement the abundance of silage and corn which he undoubtedly has on hand under Missouri conditions.

Feeding two pounds of cottonseed meal a day to a cow that has been giving milk on such a ration as corn, fodder, and timothy hay will increase the flow to a surprising degree. In spite of the many things that have combined to raise the price of cottonseed meal this year, it is probably the cheapest concentrate to buy for this purpose.

Some good dairy rations which Professor Eckles suggests in Missouri Agricultural Experiment Station Circular 44 are:

1. Corn silage, 25 lbs.; clover hay, 10 lbs.; corn, 4 lbs.; bran, 4 lbs.
2. Corn silage, 30 lbs.; alfalfa or cowpea hay, 10 lbs.; corn, 6 lbs.; bran, 2 lbs.
3. Clover hay, 20 lbs.; corn, 4 to 5 lbs.; bran or oats, 2 to 4 lbs.
4. Clover hay, 20 lbs.; corn and cob meal 5 to 7 lbs.; gluten or cottonseed meal, 2 lbs.
5. Alfalfa or cowpea hay, 10 lbs.; corn fodder, 10 lbs.; corn 5 to 7 lbs.; bran, 2 lbs.
6. Alfalfa or cowpea hay, 15 to 20 lbs.; corn, 8 to 10 lbs.

Each of these rations includes a whole day's feed for the ordinary cow, half to be given in the morning and the other half in the evening, but they are not intended for the cow of unusual dairy capacity, or one that is being fed for heavy production, or to make a record. The amounts specified are those to be fed to a cow giving from 20 to 25 pounds of milk a day, and cows giving more than this should receive more feed especially more grain, while those giving less milk should have the grain cut down. The general plan followed is to give each cow all the roughness she will eat, and about one pound of grain for each three pounds of milk produced.

WINTERING CATTLE ON SILAGE.

Investigations at the Missouri Experiment Station show conclusively that cattle can be wintered economically on a ration made up largely of silage, according to F. B. Mumford, dean of the College of Agriculture, University of Missouri.

In one experiment, a ration of corn silage and clover hay without grain fed to yearling cattle for 150 days resulted in a gain of 200 pounds for the feeding period of 150 days, at a total cost of \$11.60 or a cost of 5.5 cents a pound of gain, as compared with a total cost of \$15.75, and 7.8 cents a pound, when a similar lot of cattle was fed on six pounds of shelled corn per head per day and clover hay.

These results have been confirmed in other experiments which all point to the conclusion that when silage constitutes the major portion of the ration fed to wintering or stock cattle, the cost of wintering is much reduced.

SALT FOR DAIRY COWS.

An important item that is often overlooked in the management of the dairy herd is the necessity of providing salt in the ration of the cow. All animals that consume large quantities of vegetable food require salt.

Babcock of the Wisconsin Experiment station, found in his experimental work that the cattle when deprived of salt, became emaciated and were of low vitality and finally suffered a complete breakdown. He recommended that they should be fed three-fourths of an ounce per day live weight with an additional 6-10 ounce for each 20 pounds of milk produced.

While salt may be provided in the daily ration by mixing it with the grain, an equally satisfactory method in practice is to keep it in a convenient place where the animals may have ready access to it when they so desire. It may be used in the form of rock salt or placed in boxes in the feed lot. However, it should be borne in mind that salt is very essential to the economical handling and health of dairy cattle.

Each of four Missouri station cows is the heaviest milk producer of her breed in that state.

CREAM OF THE DAIRY NEWS

SIMPLE ARITHMETIC FOR DAIRY FARMERS.

Now to estimate the quantity of cream and butter that can be produced from a given quantity of milk should be known to every farmer. As an example, take a cow giving in one month 40 gallons of milk of which 4 per cent is butterfat. It is desired to find out how much cream and how much butter can be produced from a month's yield of milk.

First reduce the gallons to pounds, which is done by multiplying by 8.6. Thus 40 gallons of milk equal 344 pounds. In this milk there are 13.8 pounds of butterfat, or 4 per cent of the whole. To find the quantity of cream this milk will separate to, divide the pounds of butterfat (13.8) by the percentage of cream desired.

For example, 20 per cent cream is desired. Then divide 13.8 by .20, the percentage of fat in the cream, and the result, 69, will be the pounds of 20 per cent to be obtained from 344 pounds of 4 per cent milk. Sixty-nine pounds are about eight and a half gallons.

To find the amount of butter, merely add to the amount of butterfat one-sixth of itself. In this case, one would add to 13.8 one-sixth of itself, or 2.3, which would give 16.1 pounds of butter to be obtained from 344 pounds of four per cent milk.

In estimating the butter, one-sixth is added to allow for the water, salt, and curd which are added to butterfat in making butter.

THE COW AND HER PRODUCT.

The dairy cow should never carry much surplus flesh.

Do not let dogs chase and bark at the cows. Cows are very nervous.

A calf should never be permitted to suck its dam longer than three or four days.

The proper way to handle a calf is to teach it to drink milk from a clean bucket.

One of the most important steps to cleanliness of milk is wiping the udder with a damp cloth before milking.

A farmer should buy a cream separator when he is making butter or selling cream from as many as four cows.

Four things necessary to the production of clean milk are a clean place for milking, clean cow, clean milker and clean buckets.

Cows should not be housed in dark, close stalls. Sunlight and fresh air are necessary to the health of the cow and the production of clean milk.

In calculating a cow's feed, figure on one pound of grain to every two and one-half to three pounds of milk produced, and all the roughage she will eat.

Fast milkers always obtain more milk than slow ones. Milk a cow fast. Do not stop milking after the operation has begun. Finally, be sure to milk the cow clean.

Brick-shaped prints of butter are preferable to round prints because the public demands that style of package and because it is more easily handled, wrapped and packed.

A cream separator is not a complicated machine. In fact, it is very simple and can be handled by any careful person. The most important part in its operation is keeping it clean.

Butter enters into the diet of the whole civilized world. It was used as a food by the Hindoos as far back as 2,000 B. C. It is said that the Arabs discovered butter. Milk carried in skins on their camels' backs was churned by the rough handling.

COOLING OF CREAM.

The most important single factor in the production of high-grade butter is

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AGENTS! A NEW ONE

BURNS 2% FUEL

BURNS 98% AIR

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Gold plated Locket, 22-inch Chain. Set with a beautiful picture. Very handsome. Free for selling only. Large art and religious pictures at 10¢ each. Gold filled Ring, set with 8 brilliants given for promptness. We trust you with pictures until sold, and give an extra gift for promptness. Send name today. People's Supply Co., Dept. H.W. 716 Lucas Ave., St. Louis.

HOLSTEINS

10 heifers and 2 bulls practically pure Holstein, but not registered, 4 to 6 weeks old, all beautifully marked and bred up for milk and butter production. Will sell one or all at \$200 each, and crate them for shipment anywhere. EDGEWOOD FARM, Whitewater, Wis.

the proper cooling of the cream, according to Oscar Erf, professor of dairying at Ohio State University. To make the best grade of butter, the cream should be separated from the milk with a clean separator, kept separate from the cold cream and cooled immediately. The cause of bad cream in winter, the quality of cream as controlled by its temperature and the cooling of cream is treated in a bulletin by Professor Erf, which will be sent upon application to the extension department, Ohio State University, Columbus, Ohio.

CHURNING TROUBLES.

Troubles arising from winter butter making may largely be overcome by keeping the cream to be churned at a temperature of 52 degrees F. until two days before churning, when it should be placed where the temperature is about 75 degrees F. The cream should be kept at 58 to 60 degrees F. during churning time and when the butter collects into small nut sizes the buttermilk should be drained off and water at a temperature of 60 degrees F. should be poured over it, repeating the rinsing process two or three times. With the last rinsing, give 20 churning revolutions and draw off the water. To work the butter place the particles on a flat board and strew the salt over it uniformly and work just enough to distribute the salt evenly throughout the butter.

The 41st annual meeting of the Ayrshire Breeders' Association will be held at Hotel Adelphia, Chestnut and Thirteenth streets, Philadelphia, Pa., on Thursday, January 13, at 2 o'clock p. m.

The hands and clothes of the milkers should be clean and free from dust. The finger-nails of the milkers should be short and clean.

Missouri Chief Josephine produced about 13½ tons of milk in a year at the Missouri Agricultural Experiment Station and narrowly escaped making a new world's record.

Poultry Raising FOR Fun & Profit

BEGINNING OF THE FIFTH NATIONAL CONTEST, MISSOURI.

The fifth national egg-laying contest at Mountain Grove, Mo., is starting off nicely. Fifty-one and two-fifths per cent of the birds score above 90, this being the score required by the American Poultry Association to win a first prize. Therefore 51 2-5 per cent of the 630 are eligible to win first prize by the American standard of perfection.

Considering the fact that the birds were not prepared for exhibition, it is evident that a higher per cent would have been scored if they had been washed and prepared for scoring.

The five highest pens for November are as follows, the two leaders being a tie:

Eggs.	
R. C. Reds, Missouri.....	101
Oregons, Oregon	101
S. C. White Leghorns, Texas.....	92
Barred Plymouth Rocks, Missouri.....	89
White Rocks, Washington.....	86
S. C. Black Leghorns, Iowa.....	74

The five highest hens for the month are as follows, including ties:

Eggs.	
Barred Rock, Missouri.....	26
White Rock, Washington.....	25
Black Orpington, Indiana.....	25
White Wyandotte, Michigan.....	24
R. C. Red, Missouri.....	23
Barred Rock, Missouri.....	23
White Rock, Washington.....	23
Oregon, Oregon	23
S. C. White Leghorn, England.....	22
Barred Rock, Missouri.....	22

The total number of eggs laid in the entire contest for the month was 3,166.

HANDLING POULTRY UNDER ADVERSE WEATHER CONDITIONS.

Poultry packers are urged by the specialists of the U. S. Department of Agriculture to give unusual attention to preparing and packing their birds for shipment, particularly if mild weather continues. The poultry specialists say that the weather conditions in many sections have been very similar to those which prevailed in the autumn of 1913, and which, as poultry shippers will remember, proved disastrous to all packers who did not dress, chill, and pack properly.

The specialists therefore recommend the particular observance of the following methods of handling dressed poultry, which are essential to a perfect product at any time and are of vital importance whenever weather conditions are unfavorable:

Methods Recommended.

1. Keep the holding batteries for your incoming stock clean, well aired, and free from vermin, and see that the chickens have plenty of fresh water and plenty to eat.

2. Don't kill a chicken when the crop is full of feed. Give the chicken only water for 24 hours before it is killed. Food in the crop or in the intestines of a dressed chicken causes loss of flavor and hastens decay, which more than offsets any gain from extra weight.

3. Good bleeding is absolutely essential to a good appearance on the market and retards decay. Circular 61, Bureau of Chemistry, U. S. Department of Agriculture, explains the best methods of bleeding and loosening the feather muscles for dry picking.

4. Hang the chicken by both feet while picking. Hanging by one leg spoils the shape of the bird. Picking on the lap gets the skin dirty and hastens decay.

5. Dry pick if possible. Scalding is particularly undesirable because it hastens decay.

6. Chill every dressed bird until the body temperature is below 35 degrees F. Never pack or ship an imperfectly chilled bird. More decay is due to imperfect chilling than to any other single factor in dressing. Dry chill, if possible. Chickens cooled in water

lose flavor, decay sooner, will not cold-store as satisfactorily as dry-chilled, and are in every way more undesirable on the market. Refrigerator cars will carry well chilled goods in good condition, but they cannot chill warm goods to a sufficiently low temperature.

7. Pack in boxes or small kegs whenever possible. A large barrel makes an undesirable package, because where poultry is packed in large masses the weight of the upper layers crushes the birds at the bottom.

8. Line all packages with parchment paper and cover the top of the poultry before the lid is put on.

9. Wrap every head in suitable paper so that blood from one bird will not mar the appearance of another.

10. Use only good refrigerator cars and see that they are in good order. Ice and salt the car 24 hours before loading. The car, at the end of 24 hours, should show a temperature below 40 degrees F. at a point four feet above the floor and between the doors.

General Suggestions.

Never handle chickens roughly either before or after killing. Rough handling causes bruises, broken bones, scarred skins and soft places in the flesh. Undue haste on the part of the killers and pickers results in lowered keeping quality and poor appearance of the product.

Piece work which leads to quantity rather than quality makes for lower prices on the market. Those who pay by the piece should remember that they sell by the quality of the piece.

These directions will apply with equal force to turkeys in tended for the holiday market.

THE IDEAL HEN—PRIZE WINNERS AND EGG LAYERS.

In order to succeed in breeding any animal, it is necessary for the breeder to have an ideal and his efforts must be for the production of that ideal. Different breeders have different ideals. One man strives to produce the high scoring prize-winning hen, paying little or no attention to egg production, while another tries to produce the high-laying hen and ignores fancy or show qualities. All will agree, however, that the highest ideal is the hen which scores high, lays a great many eggs, and lives a long time. Of the many lessons learned in the egg-laying contests at Mountain Grove, Mo., one which stands out most prominently is that color has nothing to do with egg production and that high-scoring birds are often high producers.

In order to get an idea of the standing in the show room of the exhibitors who have had high-producing hens in the contest at Mountain Grove, a letter was sent to each contestant who has had hens in the contests which produced 200 eggs or over.

Sixty contestants were heard from, giving the prize-winning records while their hens were making the high record at Mountain Grove. One thousand eight hundred and twenty-three prizes were won by these contestants which were as follows: 653 firsts, 477 seconds, 243 thirds, 198 fourths, 92 fifths, 142 specials, 18 sweepstakes. Eight contestants had not entered any shows, therefore had won no prizes.

Many of the hens which won in the egg-laying contest won prizes before and after the contest. These prizes were won in San Francisco, New York, and Chicago shows, 10 state shows, 18 state fairs, and many district, county and local poultry shows. This would indicate that many breeders are reaching the high ideal.

These records together with observations made during the contests indicate that color of bird, color of eye, kind of comb, etc., have nothing whatever to do with egg production, and that the fine show bird which scores high is just as sure to be a good egg producer as the low scoring bird, and as the bird which scores high usually carries herself like she thought "life is worth living," she has high vitality which indicates long life.

Summarizing the fancy and utility question, we find some contestants who win in egg production, but not in the show room. Others win in the show room, but not in egg production, while others win in both shows and egg production. This leads us to believe

that it is possible to go to either extreme by breeding, or to combine the two.

The man who has never had his birds in a show has no right to claim they are high-scoring birds, and the man who has never tested his birds for egg production should not boast of high producers, but the man who can win in both deserves the highest honors.—C. T. Patterson, Poultry Experiment Station, Mountain Grove, Mo.

FACTORS THAT AFFECT THE INTERIOR QUALITY OF MARKET EGGS.

The quality of eggs depends not altogether upon the length of time they have been kept, but quite as much upon the conditions to which they have been subjected between the time of laying and of their final use. Moreover, the quality of an egg may be affected to some extent by the foods eaten by the hen which lays it, and possibly by the season of the year when it is laid.

All these points and many others are discussed in a bulletin on the interior quality of market eggs, issued by the Cornell agricultural experiment station, which explains the processes of egg production and the structure of the normal egg. It tells also how the interior quality of market eggs may be studied and advocates candling as the best method. It gives directions for candling and instructions for making candling devices.

How Foods Affect Eggs.

Careful experiments indicate that the foods eaten by hens may affect egg quality. For example, green foods and yellow corn seem to cause a deep color in the yolk, while the use of white corn, wheat, and buckwheat results in pale yolks.

Birds on free range lay eggs that have more color than those from hens kept yarded without exercise. Excessive amounts of green food are thought to produce eggs of marked odor and flavor; onions and cabbage having a direct influence in this respect.

The season of the year may also have its effect, those eggs produced in summer seeming to have a more watery albumen, or white, than those produced in winter. These watery eggs are likely to be of lower quality,

and are therefore, less desirable for cold storage or long holding.

Care of the Eggs.

The care of the eggs themselves after their production has much to do with their keeping quality, according to the bulletin. Evaporation of the water in the egg through the pores of the shell should be prevented as far as possible. A proper temperature and a proper degree of moisture should be provided. Bacterial infection and rough handling should be guarded against.

Besides cold storage, eggs may be preserved by various methods. The best of these, as stated in the bulletin, are by limewater and salt solution and by water-glass solution. In some cases cracked and broken eggs are dried or frozen, and in this condition they have been satisfactorily used for baking.

Dry feeding with dry mash in hoppers and dry grain in the litter saves time and makes healthy fowls.

The pullets and hens will all do better if the hens are kept separate and if the pullets are kept in separate pens according to their ages.

Always make friends with the poultry, for if the fowls are afraid of you every time you enter the hen house the disturbance will cut down the egg yield a little.

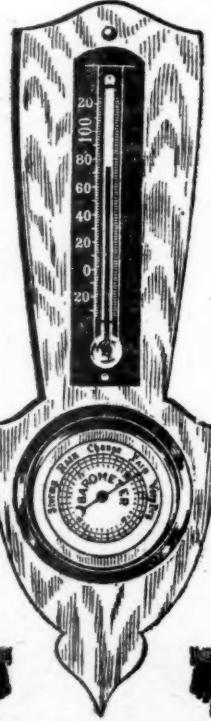
One should always remember that the hens are wearing their heavy overcoats all the time and that the hen house must not be allowed to heat up during the day time. If it does, the fowls will be uncomfortable and will feel the cold at night when the temperature goes down.



Will It Be Fair--Or Stormy--Tomorrow?

"The Weatherometer"

Will Tell You. It Forecasts The Weather Hours In Advance.



A LL of us are interested in knowing what changes of weather are likely to take place within the next twenty-four hours. There is hardly a day in the year when our plans for the morrow are not largely influenced by what we think the weather is going to be. But it is seldom we strike it right. Stop and think how many times the elements have interfered with your work, holiday pleasure, business or visiting trips, shopping tours, etc., causing you inconvenience, disappointment, discomfort, even loss of money perhaps, all of which might have been avoided had you been able to foretell the weather in advance—if you had had **Weatherometer** at hand to tell you just what "tomorrow's weather" would be.

There have been many instruments designed to forecast the weather but most of them are more or less unsatisfactory. Here, however, is one that you can depend upon. Repeated tests have proved the **Weatherometer** to be one of the most accurate weather forecasters yet invented. It is in reality a reliable **barometer** and **thermometer** combined, mounted on a handsome metal base of an attractive and ornamental design, 4 1/4 inches wide and 13 1/2 inches in height.

An Accurate Barometer—A Reliable Thermometer!

The thermometer is of oxidized brass with a 5-inch scale which truthfully registers all degrees of temperature from 20 below to 120 above zero. The barometer is entirely different from the old-fashioned unreliable liquid barometer in a glass tube. It is enclosed in a round polished brass case and consists of a scientific mechanism so delicately adjusted that it is affected by all atmospheric disturbances denoting fair weather, rainy or stormy weather, generally unsettled weather, very dry weather, etc., and all of these changes are faithfully and accurately indicated **hours in advance** by a needle on the dial as shown in the illustration. Being constructed upon strictly scientific principles it never makes a mistake. The **Weatherometer** is in fact a private weather bureau in your own home. Hang in a fairly well protected place outside the house near window or door and it requires no further care, as there is nothing about it to deteriorate or get out of order.

As invaluable as the **Weatherometer** is to every home it is literally "worth its weight in gold" to those who largely live or make their living out-of-doors. Every farmer especially should have one of them because he of all men is perhaps the most dependent upon weather conditions the year round.

We guarantee every **Weatherometer** sent out to be scientifically and mechanically correct. Each one is carefully packed in a special box made for the purpose so that breakage is practically impossible. We will make you a present of a **Weatherometer** exactly as above described in return for a very small favor. Here is our

SPECIAL OFFER Send us \$1.10 to pay for a two-year new or renewal subscription to Colman's Rural World, and we will send you this **Weatherometer** free by parcel post. Address all remittances to Colman's Rural World, St. Louis, Mo.

Know
Tomorrow's
Weather
TODAY

THE HOME CIRCLE

AND THE KITCHEN

CHRISTMAS.

The Merry, Merry Christmas
Sets the heart aglow—
We see the people happy
Everywhere we go.

The bells are ringing sweetly,
Softly falls the snow,
And 'round the fire sitting
We good feeling show.

So, everywhere the holly
and the mistletoe,
And there are many presents
For someone we know.

If you get less than others,
Just you act as though
They are more deserving.
And you'll sweeter grow.

And 'mid the joy and gladness
At what your friends bestow,
Oh, think of how important
That birth of long ago—
To the coming of the Saviour
Our future life we owe—
Then Christmas is most precious
And I'm glad 'tis so.

St. Louis. ALBERT E. VASSAR.

CHRISTMAS DINNER—WHAT TO GET AND HOW TO SERVE.

The best of Christmas dinners may be secured without too great expense this year for simplicity and science agree that it is useless to stuff the dinner with three or four dishes of the same food value, according to Miss Bab Bell of Missouri College of Agriculture. If the dinner is to be served in the country, home-grown fruits, vegetables, and fowls and fresh eggs, butter, and milk give the housewife a great advantage, and such simple things as buckberries from the roadside, or a geranium from the windowsill add to the attractiveness of the table. A few evergreen wreaths and some autumn leaves will help greatly.

In order that nothing may be forgotten, and that a big rush Christmas morning may be avoided, preparation should begin several days before Christmas. The chicken, turkey, or goose may be dressed and kept in a cool place, crumbs for the dressing prepared and seasoned, lettuce washed for the salad, and mayonnaise made ready. Mince pies may be baked and kept ready for reheating, cranberry jelly kept on hand for several days, and cakes baked and mints prepared. With all these things ready, the hostess will have much more of the Christmas spirit, and be able to entertain her guests much better.

Although prices vary greatly from place to place, Miss Bell has undertaken to select menus to fit pocket-books of various sizes.

Dinner for Six, \$1.75.

Clear Soup Wafers.
Roast Chicken. Giblet Sauce.
Cranberry Jelly.
Baked Potatoes. Green Peas.
Cottage Cheese and Pimentos.
Plum Pudding. Hard Sauce.
Coffee or Milk. Mints.

Dinner for Six, \$1.75.

Cream of Celery Soup. Wafers.
Roast Duck. Tomato Sauce.
Mashed Potatoes.

Stuffed Baked Apples.
Cabbage Salad.
Custard with Whipped Cream.
Fruit Cake.

Coffee. Mints.
Dinner for Six \$3.00.

Cream of Tomato Soup. Wafers.
Baked Turkey with Nuts and Raisin Dressing.
Mashed Potatoes.

Baked Stuffed Onions.
Jellied Salad with Cabbage and Pimentos.
Mince Pie.

Coffee or Milk. Mints.

The feast is tasted with the eye before it reaches the palate and a very simple meal may be made delicious when served on spotless linen and a well decorated table. Flowers, ferns, large dish of fruit, or something else of that kind will be available in every

The Home Circle is a meeting place for friendly gatherings of the Rural World family. All of its members are invited to meet here in correspondence and good fellowship. Send lots of letters and get really acquainted.

The Kitchen is a factor in the Home Circle that no one can do without. Help to make it helpful, by sending your contributions on subjects that are made and done in the kitchen. Tell others your ideas and experiences.

May the
Rural World Family
Enjoy
Christmas
to the Uttermost, and
be Happy and Prosperous
Throughout the
New Year!

house. The food itself helps to decorate the table. The brown fowl is always in pleasing harmony with the green of parsley, or cress, and the red of cranberry sauce. A great difference in the taste of the baked potato is made by two slashes made to hold butter and a little parsley. A large share of the joy of Christmas dinner is found in the trimmings.

ALWAYS ROOM FOR ONE MORE NEW YEAR RESOLUTIONS.

Dear Rural World Sisters:—It is nearly two years since I have been with you "in meeting," just because I have been negligent as so many of us are, and, with the children in school, many duties have been mine. Lately a baby girl has come to join our home circle and she also runs into our arrangements sometimes, but she is not for sale we want it understood. It might seem that with five noisy rollicking boys and a big sister of 12 we could spare two or three and never miss them, but let one be "out of pocket" for a short time and there's a search warrant issued for the missing one at once. No indeed, there's never one to sell, no matter how many we have. The old farm house in the mountain has always room for one more.

Away back yonder when we had only two babies we thought that if we had one more we never could get along; now we have seven and we can't tell any difference. We get along somehow just as we did then. As long as one tries to get along and help oneself the gods will help them, the old adage says, and I suppose it must be true.

The past summer was a good one in sunny Tennessee. Good crops of all kinds were raised. Fruit was scarcer than usual, but most of us had apples to dry and make butter for home use.

The glad New Year is fast approaching and, of course, we are all resolving to do better in every respect—be better parents, better neighbors, better farmers and housekeepers. Of course, we'll break many of our resolutions just as we always have, but we'll be better for having made them anyhow, for every step made toward right is just one step farther away from wrong. These New Year resolutions are good things for us all, so let's resolve to make (and incidentally to break) more of them this year than ever.

Well, as it's been so long since I was with you, and many no doubt have forgotten me, I'll not stay long this time; but, if I seem to be welcome, perhaps I'll come again with some help for the housewives. — "Tennessee Farmer's Wife."

TEACH ORDERLINESS BY HAVING A HOUSEHOLD POUND.

To the Home Circle:—Housewives in general lack systematical methods in their housework. The helter-skel-

ter, happy-go-lucky, hit-or-miss methods employed by so many is responsible for a great number of unhappy homes.

Discontentment and disorderly homes are boon companions, and while some home-makers may be overzealous in the way of methodical neatness, there is a happy medium that everyone should strive for, so far as weather, health and time permits—"A time for work and a time for play" is for only those who get through with their work in good time.

Children should be taught early in life to keep their belongings in the right place. It may take something like a "pound" to break them in, but after paying to get a desired article out of the pound, (box or drawer), they will begin to be cautious about leaving books on the beds, playthings over the floor, hats, caps, shoes, etc., just where they drop from their hands. To prevent hard feelings, the pound-keeper should be changed occasionally. In my own case, our wee girlie, aged four, captured any bonnet on the machine. As it was my first offense, I got off with a fine of two pennies.

Shelves for the books, racks for the papers, hooks for coats, caps and rubbers; shelves and boxes for other articles, and each article in its allotted place, does away with the cluttered rooms. A place for everything saves many unnecessary steps in hunting lost or misplaced articles. To be ready in the case of an emergency to find the needed bandage, string, or remedy, or to lead the unexpected guest to their room; to be able, in fact, to know where each and every part of the household machinery is kept, to keep the grooves oiled and running without friction, is an art. It requires time, I am watching for the old writers' reunion.—Mrs. J. K., Arkansas.

patience and studious forethought to plan over 1,000 meals per year; it looks like a stupendous task; yet, that is what we housewives face year in and year out. It is to lighten the burden that I write these few suggestions. —Mrs. D. B. Phillips, Tennessee.

THE SYMPATHETIC NOTE IN OUR LETTERS AND THOUGHTS.

Dear Home Circle:—It would be nice if we had a little corner all our own, to tell our discouragements as well as our joys. (Let the Home Circle be "it.") —Editor.

One of the joys came my way recently in the shape of a small check, so unexpected as to almost take the breath away. What great hope for the future does such tokens bring.

But when you have a manuscript returned with the words, "lack of human interest," stamped thereon it is a temporary discouragement. You wonder as you slowly read the article over where you have failed. But always thank the editor for his criticism, knowing it was done to help you.

While visiting one of my friends, she used those words "human interest." I asked her for a definition of those words, or what they meant to her. The reply was: "Putting yourself in the other's place, feeling their sorrows or joys." "How simple," I said, "but I have tried to write without doing that," for I knew in a flash that that was lacking in my make up.

So now I am sympathizing with everything—the horse when it is afraid of an auto, a chicken that was in the way of the horse when it was frightened and was tramped upon, hurting its foot, with everything that deserves and needs sympathy. Our little failures may help another over a rough place in their striving to put their thoughts upon paper in readable shape.

I am watching for the old writers' reunion.—Mrs. J. K., Arkansas.

Happiness on the Farm

INE years ago we were living in the city of C——, and I was decidedly unhappy. And the reason for my unhappiness was ill health which resulted from a lack of exercise. I had been born and reared in the country, and living in a little "flat" without any exercise day after day had a bad effect on a healthy constitution.

Of course, I had my house work to do, but the little I had to look after did not keep me busy, nor was it out-of-doors for we could not even have a garden.

The editor who wrote the article describing all farm women as unhappy does not know, perhaps, of people who are unhappy in the cities. I have in mind a family in the city of which the husband was suddenly thrown out of work. And because he was rather elderly, he could not find any work, hunt as hard as he might. His wife feared they would be thrown out of the flat any day and lived an unhappy life. This woman would gladly have taken in any kind of work to help along, but she could not get it.

Another unhappy family in the city I remember—the husband became discouraged by the loss of his position and deserted his family. The woman had a very difficult time to keep off starvation. She greatly desired to move to the country with her children, but having no funds, could not get away from the city. In my wide acquaintance in the country, I do not know of one case of desertion in the country, while we read of many such cases in the cities.

I well remember witnessing a sad incident in the city that I never saw nor heard of in the country. One Thanksgiving Day I was walking along the street in the city when I saw a little girl of about 10 years crying very bitterly as she stood on the sidewalk in front of the house. I stopped and asked her about the cause of her crying. She said that her father was out of work, couldn't find any work at all; they had no money to pay the rent

and the owner of the flat was throwing their things out on the sidewalk and they had nowhere to go. I have never met such a sad sight among poor people in the country. Of course, there are some poor in the country also, but they are not thrown out of a home and shelter so heartlessly as this poor family in the city.

It is true that life on the farm is apt to grow monotonous with the round of the same daily duties. In order to avoid this, we make use of every holiday. Last Monday, a holiday, we decided to go to the river. We selected a spot where a large company is building a great concrete dam, 87 feet high. Many other families had the same idea, for about 100 families were there that day, coming in wagons and surreys with the whole family and a well filled dinner basket. Our family certainly enjoyed the day. Several picnics are usually attended each year and an annual affair at the county seat—the old soldiers' reunion. Thousands gather here each year and one sees and meets many friends and relatives. Such little outings in the country cost very little if anything, but to do the same thing in the city with a family of seven or eight would cost several dollars each time.

It is also true that we folks in the country cannot arrange our work on an exact schedule, for in the busy season one must work a little later than during idle days. When having hands hired and working in hayfield or harvest, one cannot stop on the stroke of six, as is done in the factory. Then on the other hand there are long periods of rest during the winter months when work need not trouble one.

Having lived in the city for a time, we know how to enjoy country life all the better. We could not enjoy many things in the city—such as strawberries and cream; now we have them frequently during the space of five weeks. To make a gallon of ice cream in the city is too expensive, but now we have it frequently during the

hot season for supper. When we bought watermelons in the city, we could scarcely ever get a first-class one; now we get them fresh from the patch during eight weeks and thoroughly enjoy them.

As there are all kinds of men, so there are, no doubt, some greedy farmers who have become severe taskmasters, making life miserable for themselves, their wives and children; but of such men there are only a few among a thousand farmers. I believe there are wives in every walk of life who would write complainingly of their lot and wish themselves in another position, if given the opportunity. So it is manifestly unfair to judge the great body of American farm women unhappy by the unfortunate lot of a few.—Mrs. P. C. H., North Carolina.

DEAR OLD DAYS AT HOME.

Take me back to that dear old cottage on the hill,
Where all sweet memories and every charm doth linger still,
Where my heart was light and merry all the day,
Where the world seemed one glad endless May!
'Tis no dream; it springs from the vital heart, this longing
To know again those dear old days at home.

Take me back where the heart knew peace and rest,
Where never a care too great to sob out on mother's breast.
Where everything on the dear old place was so in tune,
Where roses bloomed the fairest in the mild sweet June!
Something like a mist comes in my eyes as I sigh,
To know again those dear old days at home.

Take me back to that dear old home of yore;
The world is cold—a mystery too strange for the heart to know—
Let me hear again the music and the song.
That taught my youthful heart to shun all earthly wrong.
Oh, a thousand reasons why I long for that cottage on the hill,
A thousand thoughts that cause the soul to thrill.
And may God let fall a blessing for the soul that roams,
As I sigh to live again those dear old days at home.

Kansas MAGGIE L. RILEY.

PIANO-TUNING AN OCCUPATION FOR WOMEN.

In many small towns, villages or rural districts, numbers of pianos stand sadly out of tune because no tuner has recently shown up in the locality, and the owners have not learned how much longer and better their instruments wear when kept in tune. The fact is, piano-tuning is one of those professions that has not been overcrowded, and there are actually not enough first-class tuners available since the piano has invaded so many homes. It is now suggested as a business which offers many inducements to women.

Neither great expense nor much time will be required for one who has received a musical education to learn the profession, and the right person will have little difficulty in gaining proficiency in it. Any piano manufacturer will readily initiate a woman in the intricacies of the pianoforte, and all that pertains to its construction, and to tempering in tuning; for it will be readily understood that as a tuner she may make many piano sales for the house. Anyone clever with tools

—and many women are—can readily learn to make small repairs, such as putting on strings and re-leathering the hammers. A short course of practice on some old piano will prepare a tuner to start on her career.

What is absolutely essential for the work is a correct ear. This cannot be purchased, nor can it be imported by any amount of instruction in piano-tuning. Correct training early in life may do much to develop a native sense of tone-perception, and the girl who would make a great success of piano-tuning must cultivate a keen sense of pitch variations. She should have a knowledge of harmony and the laws of acoustics, both practical and theoretical.

A piano-tuner's tools are not expensive, and are easily carried. A tuning-fork, a key, a hammer, a pair of tongs, a screw-driver and a pair of pliers are about all that are needed. These can easily be packed in a small satchel.

Piano-tuning does not demand great physical strength. It is rather a matter of delicate sensibilities than of bodily force. Unquestionably it can be made to pay well. The usual prices for tuning are from \$2 to \$3, and more when repairs are to be made. If to the amount thus earned be added the commissions for the pianos a tuner can frequently find opportunities to sell, it will be seen that the girl who enters the piano-tuning field may earn a handsome income.

There is something else she may do: By teaching people the importance of keeping their pianos in tune she may do great service to the divine art of music.—H. M., Illinois.

USES FOR OLD NEWSPAPERS.

To the Home Circle:—As we have no cellar, we find a good plan to keep our canned fruit through the winter is to wrap it in newspaper. We put several papers under, over and all around a layer of cans.

Old newspapers are very useful for many purposes. A lady told me that she had made a comforter out of them. They are nice to spread on the kitchen table under warm pots or pans, to keep an oilcloth from being blackened, to rub off the stove with, as well as to kindle the fire with.

Colman's Rural World we keep or give to some one who will be benefited by it, and our church paper the same, for we learned long ago this old verse:

'Do all the good you can
In all the ways you can,
To all the people you can,
As long as ever you can.'

—Sallie, Missouri.

A GOOD CHRISTMAS GAME.

There is so much of festivity in the Christmas decorations and so much of good will abroad that we all feel in a good-time party mood. It's "the feel in the Christmas air." So if we plan just a few "things to do," the Christmas party is likely to be a success. Can you imagine anything more appropriate than "A Christmas Shopping Pantomime" to start the fun of the evening?

The leader, who should be a good talker, first gives to every one present the name of an article she is presumed to have bought on one of her shopping expeditions. The person whose name is called is to describe it in pantomime. For example, the leader begins by saying: "The members of my family are getting almost destitute of clothing; yes, positively destitute. Materials are not so durable as when I was young, and hardly pay for the making nowadays. I hurried up the housework this morning so as to have a good, long day for shopping. And, after making out my list, even down to a—Miss Smith."

Miss Smith rises, and in pantomime cuts a slice of bread, butters it, and begins to eat it, while the company try to guess the article. The leader then proceeds with the story, bringing in various articles of wearing apparel or household use, which the person called on describes in pantomime. If any articles are not guessed, they may be brought into the story several times. If both men and women are among

the guests it will increase the amusement to give a lady's hat to a gentleman and have him primp before the mirror as he tries it on; while a lady

may manipulate a pocketknife or razor. The story is ended by the delivery of goods at home, when all rise and act their specialties.



JUST SEND ME ONE DOLLAR

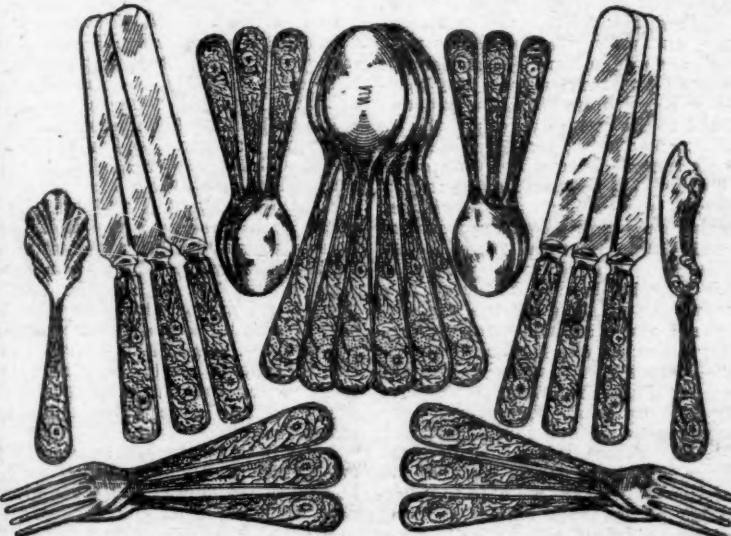
and I will ship C. O. D. to any open railroad station in the U. S. east of the Rocky Mountains, this fine Willard Steel Range. Anyone can say they have the best range in the world, but I will furnish the evidence and leave the verdict to you. After you examine this range, if you are satisfied in every way, pay agent \$14.00 and freight, and you become the possessor of the best range in the world for the money. The range has six 8-inch lids; 17-inch oven; 15-gal. reservoir; large warming closet; top cooking surface, 30x36 inches. Guaranteed to reach you in perfect order. Shipping weight, 400 lbs. "Write for catalog." Agents wanted.

WM. G. WILLARD,
No. 4 Willard Bldg.
320 Chestnut Street.
ST. LOUIS, MO.

FREE SILVERWARE

We have just received a fresh shipment of these beautiful 26-piece Electric Silver Sets from the factory. They won't last long. Send for your set today. We refund your money if you are not satisfied.

26-Piece Electric Silver Set



We Want You to Have a Set of This Silverware

We have in the past made many fine premium offers of silverware to readers of Colman's Rural World, but this is the first time we have ever been able to offer a complete electric Silver Set on such liberal terms that it is the ordinary cheap silverware which is plated on a brass base and consequently changes color and has that "brassy" look just as soon as the plating wears off. This set which we offer you here is plated on a white metal base; therefore each and every piece is the same color all the way through and will wear for years. As shown in the above illustration there are 36 pieces in this set—6 Knives, 6 Forks, 6 Teaspoons, 6 Tablespoons, Sugar Shell and Butter Knife. Each piece is full regulation size for family use, the handles are handsomely embossed and decorated with the beautiful Daisy design which is now so popular and the blades of the knives and bows of the teaspoons and tablespoons are perfectly plain and bright polished.

It is only because we buy this set in large quantities direct from the factory that we are able to secure it at a price that enables us to make the remarkable offer below. It is by far the greatest value we have ever offered. We will send this beautiful 26-Piece Electric Silver Set exactly as illustrated and described to any address upon the terms of the following special offer.

We have sent hundreds of these 26-Piece Electric Silver Sets to our readers, and in every case the subscriber has been delighted beyond measure. We are so sure that this 26-Piece Electric Silver Set will please and satisfy you that we make this offer,—and if you are dissatisfied after you get the 26-Piece Electric Silver Set, we will refund your money, or send you another set. You know we couldn't make such an offer unless this 26-Piece is exactly as we represent it.

How To Get This 26-Piece Silver Set Free

Send us a three years' new or renewal subscription to Colman's Rural World at our special price of \$1.00 and 25 cents extra to help pay postage and packing charges on the 26-piece Electric Silver Set—total \$1.25, and the complete 26-Piece Silver Set will be sent you by return mail—all charges paid. If you cannot get a new subscription to Colman's Rural World just send us \$1.25 and we will add a three years' subscription to your own subscription to Colman's Rural World. This offer may not appear again. Remember, for \$1.25 you get Colman's Rural World one year, and in addition we send you the 26-Piece Electric Silver Set—all charges prepaid. Sign the coupon below today before this offer is withdrawn.

Sign This Coupon Today

Colman's Rural World,

St. Louis, Mo.

Enclosed find \$1.25 to pay for a three years' subscription to Colman's Rural World. It is understood that you are to send me the 26-Piece Electric Silver Set—all charges to be prepaid. If I find the 26-Piece Electric Silver Set is not better than you claim, I will return it to you, and you are to send me back my money.

Name: _____

P. O. _____ State: _____ H. W. D. _____



Vanity Case FREE

Made of rich German silver, with fancy flower border. Has good mirror and powder puff compartment, places for quarters, dimes and nickels, also strong catch that will hold cards and bills, 16-inch chain. Given free to anyone for selling 20 large sets and religious postcards at 10 cents each. We trust you will pictures until sold and give you 10 beautiful postcards as an extra gift for promptness. Send your name today.

People Supply Co., Dept.



Conducted by the President—Essie-lyn Dale Nichols, Sweet Water, Ill.

Dear Little Folks:—This week we have four interesting games to publish and I believe you will enjoy them all. Our first prize game was sent in by Charlie Browning of Arnel, Colorado, whose game is called,

Murkey.

This is an out-door game and any number of players may take part in it. To begin: A catcher is chosen and then a tin can is secured which is placed on the ground inside a ring. One of the players kicks the can out of the ring and all but the catcher runs and hides. The catcher must put the can back in the ring, shut his eyes and count ten and then go hunt the other players. If some of the players happen to be in sight when the catcher opens his eyes the catcher touches the can and calls "Murkey" and the name of the player seen, and that player is catcher next time. The catcher must hunt the other players, of course, and the other players try to reach the can and call "Murkey," and their own name before the catcher can do so.

Charlie—This game is a great deal like "Hide and Seek," but there is enough difference to make it interesting. A prize will be sent to you soon.

Our second prize game was sent in by Ruby Day of Oliver Springs, Tennessee, whose game is called,

Handkerchief.

To begin this game the players form a circle and one goes around outside the circle with a handkerchief which is dropped behind one of the players in the circle, and if the player notices it he (or she) must pick up the handkerchief and try to catch the one that dropped it; otherwise the one that dropped it may push the unwary player into the ring upon the second time around and may carry the handkerchief again. But if player picks up the handkerchief and catches the other player, the one caught must go inside the ring while the other goes around with the handkerchief and drops it behind some player in the circle. Of course, the one inside the ring tries to grab the handkerchief every time it is dropped behind another player before the other player gets it. If successful the one in the ring gets to go around with the handkerchief instead of the one behind whom it was dropped, and

that player must get inside the ring and watch a chance to grab the handkerchief.

Ruby—We printed a game called "Drop the Glove" which was something like this game, but I think our little members will like to play "Handkerchief," too, so I am printing it. A prize will be sent you shortly. I am glad you like the club.

Our third prize game was sent in by Marcie Keeling of Mt. Enterprise, Texas, whose game is called,

Going Grape Hunting.

The boys all choose partners and form into two lines, the boys on one side and the girls on the other, each player opposite his or her own partner. The girl at the head of the girl's line begins the game by starting down the line and her partner asks: "Where are you going?" She replies: "I am going grape hunting." The boys ask: "May I go with you?" and she says: "Yes, if you can catch me." Then she runs down the line while the boy tries to catch her. If he doesn't catch her before she gets to the foot of the line she goes around the boys and the boy goes around the girls; then if he doesn't catch her when they get back to the head of the line, the girl goes around the girls and the boy around the boys and so on until the boy catches the girl. Then they go to the foot and the next couple starts off in the same way. Then the boys go "grape hunting" and the girls must catch them in the same way.

Marcie—This game is something like another game already published, but is different in some ways, so am printing it. You will receive a prize before long.

Now dears, about our fourth prize game I am sorry to say that upon reading it over a second time I found that it had already been published, so, of course, cannot print it. But I will send it to the writer a prize anyway for her trouble in sending it to the club. This little writer's name is Gracie Keeling of Mt. Enterprise, Texas.

Martha Smally, Rose Hilltown, Boons Path, Va.—Your game has already been published, only perhaps under another name. But I will send you a prize for your trouble.

Vernie Phillips, Gravette, Ark.—Your game has already been published, but will send you a prize anyway. I am very glad that you like the Merry Game Club.

Wishing you a Merry, Merry Christmas and a Happy, Happy New Year, I will say good bye until next time.

Her Own Idea.

A certain little girl was discovered by her mother engaged in a spirited encounter with a small friend, who had got considerably worsted in the engagement.

"Don't you know, dear," said the mother, "that it is very wicked to behave so? It was Satan that put it into your head to pull Elsie's hair."

"Well, perhaps it was," the child admitted, "but kicking her shins was entirely my own idea."

HONEY VINEGAR.

Vinegar made from honey has an exceptionally fine flavor and is not expensive. A small amount of honey furnishes a large amount of vinegar. Follow these directions: Dissolve thoroughly in two gallons of warm, soft water one quart jar of extracted honey. Give it air and keep it in a warm place where it will ferment and make excellent vinegar.

Potted Beef.—Boil the beef, take off all fat and chop the meat very fine. Season with salt, pepper, allspice and a little sage. Melt enough butter to knead the meat together. Pack it in bowls and pour melted butter over it to keep it. This will keep at least a week in a cold place.

To Seal Cans or Bottles.—Pickles, preserves and jam will keep perfectly if sealed in the following way: Cut pieces of strong muslin large enough to tie down over the tops, dip center in hot paraffin and tie down tightly, over mouth of bottle. When all have been filled, pour more paraffin over the tops. This is a fine way to use your cans and bottles that are minus corks and lids.

Beacon Burner FREE
FITS YOUR OLD LAMP.
100 Candle Power (including pure white light from coke-oil or coal oil. Burns either gas or electricity). COSTS ONLY 1 CENT FOR 6 HOURS.
We want one person in each locality to whom we can refer new customers. Take advantage of our special offer to secure a Beacon Burner FREE. Write today. AGENTS WANTED.

Big Sleeping Doll FREE



This fine sleeping doll is nearly two feet tall, and is all the rage. She has slippers, complete underwear, stockings, etc. Dress is very prettily made, half length, and trimmed with lace; also has a little chatelaine watch with flour-de-lis pin. You can dress and undress this doll just like a real baby. Has curly hair, sandy teeth, rosy cheeks, beautiful eyes, and goes to sleep just as natural as life when you lay her down.

This doll tree for selling only 10¢ of our magnificient art and religious pictures at 10 cents each. We trust you will like these until sold, and give an extra surprise gift for prompt payment. PEOPLE'S SUPPLY CO., Dept. R. W. St. Louis, Mo.

THE RURAL WORLD PATTERN SERVICE



1512. Girls' Over Blouse Dress with Guimpe.—Cut in four sizes: 6, 8, 10 and 12 years. It requires 2½ yards of 46-inch material with 1½ yards for the guimpe for an 8-year size.

1513. Ladies' Costume.—Cut in six sizes: 24, 26, 28, 30 and 32 inches bust measure. It requires 6½ yards of 44-inch material for a 36-inch size. The skirt measures about 2½ yards at its lower edge.

1514. Girls' Underwaist, Bloomers and Petticoat.—Cut in six sizes: 2, 4, 6, 8, 10 and 12 years. For an 8-year size it will require 1½ yards for the petticoat, 1½ yards for the bloomers, and 1 yard for the waist at the lower edge.

1515. Girls' Dress With or Without Belt.—Cut in four sizes: 4, 6, 8 and 10 years. It requires 3½ yards of 36-inch material for a 6-year size.

1516. Dresses for Misses and Small Women.—Cut in three sizes: 16, 18 and 20 years. It requires 5½ yards of 36-inch material for an 18-year size.

1517. Ladies' French Dress With Two O'leander Hat.—Cut in four sizes: 18, 20, 22 and 24 inches in height. It will require 1 yard of 36-inch material for the dress and ½ yard of 37-inch material for the hat for a 22-inch size.

1518. Ladies' Costume.—Waist No.

1512 is cut in six sizes: 24, 26, 28, 30, 32 and 44 inches bust measure. Skirt No. 1512 is cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It will require 10 yards of 36-inch material for the entire costume for a medium size. Two separate patterns, 10¢ for each pattern.

1519. Boys' Suit With Straight Trouser.—Cut in four sizes: 3, 4, 5 and 6 years. It requires 3½ yards of 44-inch material for a 4-year size.

1520. Girls' Middy Dress.—Cut in five sizes: 6, 8, 10, 12 and 14 years. It requires 4½ yards of 44-inch material for a 10-year size.

1521. Ladies' "Over All" Apron.—Cut in three sizes: Small, medium and large. It requires 4½ yards of 36-inch material for a medium size.

In ordering patterns for waist, give bust measure; for skirts, waist measure; for children, age; for aprons say, large, small or medium.

These patterns will be sent for 10 cents each (silver or stamp). Send 10 cents for each additional pattern.

Send this coupon and send it to COLMAN'S RURAL WORLD, 718 Lucas Ave., St. Louis, Mo.

Pattern No. Size Years

Bust in. Weight lbs.

Name Address

**A LETTER TO SANTA CLAUS.**

Dear Santa Claus, I want a lot of things for Christmas day; Please don't forget the number on The street on which I stay— "Tis Eighteen thousand forty-six On "Stacksofpresents" street, Right next to Jones, whose daughter is So very nice and sweet— And, by the way, don't go there first, As she might hold you up, And I might lose what is for me, Then sad would be my cup. The list I sent the other day Ain't half I really need, So I'll just now add something more And hope I will succeed— A pair of boots, a flag, a drum, A pony cart and slate, A knife, a sword, a ball air gun, And finest pair of skates, And anything that you may have That you can spare for me, Dear Santa, I'll be glad of it, And take it thankfully. And now good-bye, don't forget, What I have written you. Long may you live and happy be, And keep me happy, too! P. S.—Beware of Jones' dog next door.

St. Louis ALBERT E. VASSAR.

MY ACQUAINTANCE WITH SANTA CLAUS.

To add to my perfect enjoyment of Santa Claus, the huge old chimney in the back room downstairs, was given over to the offices of a stone mason, and after being long bricked up, it was once more ready for a fire; the wide hearth was put into shape also. All this was done as the Christmas tide rolled near and we had great old-fashioned conflagrations on wintry nights.

Then when the great night arrived, the fire was allowed to burn low, and as the sandman was unkind enough to slip in ahead of Santa, I dozed in the little chair in which I had announced my intention of awaiting the reindeer arrival. It was off-to-bed with me then!

Although only six years of age, that night is remembered wonderfully well, and it has a sad significance, for it was the last Christmas my darling daddy would spend on that hearth, where for years he had done so much to facilitate the coming of St. Nicholas. I can yet see him, handsome and smiling, looking up the chimney and then listening for the sound of sleigh bells, and I recall how he came over to the foot of the stairs to caress me again, and then stood looking after me as I endeavored to waltz him a kiss. It was my last Christmas with a hero who had no rival in my heart except the good friend of children whose eve it was.

How I loved Santa Claus—the dear old man who lived in a land above the earth and worked all the year round making toys for children; such dear little bureaus, beds and tables, and dolls, best of all! His constant friendship for me resulted in my having a large collection of testimonials of esteem.

The affection and interest of Santa Claus is a valuable asset to childhood, and it is sad to think of a childhood in which he is not an object beloved and yearned for. I did not know in the years I was Santa's constituent, that there were children over whose humble roofs his reindeer team did not prance—life was a paradise and nothing of sorrow came therein, yet as years went by, I learned of the child to whom Santa Claus is a stranger.

It was with extreme reluctance and much grief that Santa and I parted company at the tender age of eight, (I was eight, not Santa). He came as usual, and it was on that self same hearth that our estrangement occurred. It is one of the tragedies of

childhood to fall out with the kindly old traveler of the air. Long before the air-ship rose like the lark, straight up into the clouds, Santa Claus was driving his Lapland team without any noise or ostentation. His sure-footed animals had a highway along the clouds and over roofs and the chime of the bells was music sacred to Christmas alone!

That great well-loaded sleigh, so closely wedged with pretty things that it took all night to distribute the load—that dear, dear sleigh—it is worth having been born, just to hear of it, dream of it, love it, and plan the great surprise that will reveal it to us amid the snow on the holy night.

But that wondrous vehicle paused no longer beside the south chimney after that eve wherein I stole softly out of a closet, into the dim red glow of the hearth fire, and said: "Darling Santa Claus, I love you so much and want to thank you for your gifts!"

One must not see Santa! He is modest and fond of solitude, and the fairy spell is broken when a child awaits his coming. Perhaps he tip-toes to the bedside and imprints kisses on the little sleeper and laughs softly

daily and almost hourly for food.

Their favorite diet is suet, which never seems to pall upon their appetites. When one sees the amount they eat daily, and considers how many insect eggs and larvae would be required to equal it, he begins to realize what great benefit these birds are in ridding our trees of multitudes of pests.

I am of the opinion that at least some Downies remain mated through the winter. I have seen the male, in autumn, fighting off English sparrows from the tree in which his mate was excavating their winter home; and to the food-box that I placed for them, male and female often came, nearly at the same time, and between them there seemed to be a perfectly good understanding; whereas, if another male appeared—as was frequently the case—either male or female gave him battle. One morning, when the usual pair was near the feed-dish, a strange male appeared on a near-by post. Between the two males a battle was soon on, the stranger being driven round and round the post in a somewhat ludicrous fashion, the female meanwhile, assisting by an occasional dive at the intruder.

As a rule, the Downies are not aggressive fighters. It is so easy for them to preserve peace by slipping around the tree or post that their efforts are nearly always on the defensive.

One day, when the box had been replenished with English walnuts, so full did Downy fill himself that he could eat no more; so, taking a position on the post just below the box, he remained perfectly still for some time, waiting for his appetite to return; only occasionally raising his head and pecking languidly at crumbs in cracks of the split bottom, being as loath to leave as the little newsboy at a charity Christmas dinner, who, when offered "another helping," said, "I can't eat any more, but maybe I might chew a little."

The next morning Downy came about 8 o'clock, when the box held a mixture of suet and nuts. Instead of eating his breakfast, he perched perpendicularly upon the side of the table, and simply kept watch, turning his head first to one side and then to the other, and sometimes looking straight backward. Occasionally, he pecked lightly at the nuts, but seemed to do so as a girl tastes the candy she would save, lest the pleasure of eating it pass too quickly.

When nuthatches and chickadees are eating at the food-box, they pay little attention to anything that is not in their immediate vicinity; while Downy "keeps tab" on all that passes within reach of eye or ear. Yet he soon learns to trust you, if you are friendly, and does not leave the food that you have placed for him though you go quite near.—F. H. Sweet, Virginia.

DELICATE SCRAMBLED EGGS.

Make two cups of hot white sauce, using four tablespoons of melted butter. Break four eggs and yolk of a fifth into a bowl and beat lightly. Beat in another bowl the white of a fifth egg as dry as possible. Put white sauce in a granite dish (in which it can be served) over the fire and when hot stir in the beaten eggs with yolks. Stir constantly, lifting from bottom of dish until it begins to thicken, then put in the beaten white and mix it as rapidly as possible. Take from fire and cover and put in fireless cooker to set. If you have none, wrap dish in many newspapers. It can stand as long as an hour without deteriorating. A convenient dish to make, if waiting for someone at an uncertain time.

LET ALL THE PEOPLE SING.

Community singing was tried with success in Cloquet, Minn., last summer. The people of Cloquet gathered in a park, and, under proper direction, sang old and familiar songs. According to reports everybody liked the plan.

If community singing is a good thing in summer, why not in winter? The school house, town hall, or some church suggests itself as a suitable place.

OUR SHORT STORY

A Christmas**Cinderella**

By Allison Howard Gibson.

(Continued from Last Issue.)

There was a sting of sarcasm in the expression that made Hal look sharply at the girl. But her face was half-a-vered and her eyes looked steadily out of the window at the nodding pines.

"She won't care a rap," he stated. "I've never met this paragon of a chum of my sister's, but Sis has quite inundated her letters with the charm of her friend. As I am to be best man and Miss Elding is to be bridesmaid, it has been arranged for us to meet at Bob's Christmas party."

"How interesting! I suppose you are afraid this paragon has fell designs upon you," she remarked.

"I'm not that vain. But the fact is, I've just met some one that interests me more than Miss Elding ever can."

His words caused her to look at him half-inquiringly. The light in his eyes brought a quick crimson to her cheeks, and on a slight pretext she left the room. It was Aunt Jane who attended to his wants the rest of the meal.

He did not catch another glimpse of Bert till the dinner was under course of preparation. In coming to the kitchen door and asking for a cup of water, he surprised the girl with

This Splendid Watch Free

Our fully guaranteed American made Watch is highly engraved, stem-wind, stem set, simulated gold finish; desirable size for ladies or gents; late thin model, fancy bevel, new design. Given free for selling only 20 large, beautiful art and religious pictures at 10¢ each. We trust you with pictures until sold. Send name today. We give a splendid job for promptness.

PEOPLE'S SUPPLY CO., Dept. H. W., ST. LOUIS, MO.

52 Xmas Post Cards FREE

Our prize collection of 52 most beautiful Christmas postcards, gift tags, seals, stickers and labels in lovely colors and exquisite gold embossed designs, all different. The daintiest and most complete collection ever offered. Make your Christmas gifts attractive by adding to them of the Holiday gifts with few appropriate Christmas stickers and labels. Remember your friends with the Christmas greeting postcards. Entire collection sent free and postpaid to all who send in only 10¢ for a three month trial subscription to our big monthly home and story magazine. Address HOUSEHOLD MAGAZINE, Dept. X13, Topeka, Kansas.

Harold Gregson Art Calendar 1916**FREE**

This beautiful art calendar for 1916 is reproduced in 12 delicately blended colors from the original painting by Harold Gregson, the famous New York artist. The accompanying illustration gives only a faint impression of the rare beauty and exquisite coloring of the original. The gown is a deep rich purple almost impossible to describe and the subject and color scheme is a work of art which will adorn any home.

The panel is 36 inches long by 7 inches wide. It has absolutely no advertising on the front, the calendar being printed on the back. This beautiful panel is a wonderful reproduction of the original painting. Framed or unframed it makes a picture to be proud of and one you will enjoy for years.

GIVEN FREE WITH American Farming

We send this beautiful calendar free, securely wrapped on mailing tube, to introduce our practical little farm paper, containing only the newest and best of farm reading, once a month, for the farmer, his wife, the boys and the girls. You will like AMERICAN FARMING from the very first issue.

OFFER

We will send one of these beautiful Art panels free and postpaid to say address in the U. S. with a yearly subscription at 25 cents, new or renewal. To our long term subscribers and others who want a copy, we will send the ART PANEL for 10 cents in coin or stamps (coin preferred), to cover wrapping and mailing. Send early. Supply limited.

American Farming 118 Art Dept., Chicago

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sleeves rolled above her elbows, deep in the mysteries of compounding a certain delectable dessert for which he had expressed an attachment to Aunt Mary Jane. She was an adorable picture to Hal's eyes as she looked up at him with startled face, her plump white arms plunged in a deep doughpan, and a long pinafore protecting her gown of simple dark print. As he drank the water which she handed him, and saw a glad expression light up her face, the young man felt a trifle uncomfortable and apprehensive. But he wasn't quite sure whether it was on his own account or this innocent mountain girl, who was interesting him more than any woman had ever had the power to do in all his twenty-seven years.

"I'll stay away from Bob's ranch as long as I dare," he mentally decided—"Aunt Mary Jane don't run me off."

But the third afternoon of his stay, Bob, having heard of his prospective brother-in-law's accident in some mysterious way which Merton couldn't ferret out, purr'd up the trail in his big car and whisked him off to the ranch. When he had asked for Bert, to say good-by, Mrs. MacLarnie informed him she was off up in the hills somewhere gathering mountain holly. So he left the adobe with a strange mixture of pleasant memories and regrets tucked away in his heart.

At the ranch he met his sister and his aunt, Mrs. Whitney, who had just arrived from San Francisco to act as chaperone at the party. After worrying Hal with no less than a hundred questions in rapid-fire succession about his accident, his nurses, etc., Millicent remarked:

"And to think I can't present you to Val yet."

"Who is Val?" he asked.

"Val—my pet nickname for Miss Elding," replied his sister. "She has been detained and won't arrive at the ranch till Christmas Eve."

"The Lord be praised!" murmured Hal in an undertone.

"What?" inquired his sister.

"I remarked that I hoped my foot would be well enough for the dance Bob is giving that night," he fibbed.

"I'm so disappointed. I wanted you to meet Val right away before Mr. Halsey and Fred Denton get here. She's so perfectly charming they're sure to monopolize her when they arrive" she prophesied.

"I hope so," Hal assured himself as he lit a cigar that Bob brought him.

Christmas Eve found the big room of the house decorated appropriately with mountain holly, mistletoe, and Chinese lanterns. As Hal Merton lounged near a doorway chatting to his sister, his glance fell upon a beautifully attired young woman with Fred Denton. The back of her head was toward him, but something in its quiet poise, in the glory of the abundant red-gold tresses above the finely rounded white shoulders, made his heart beat almost to the point of suffocation.

"Who—who is that, Sis?" he demanded quickly.

"With Fred?" and a peculiar smile hovered about the corners of his sister's mouth. "Oh, that's Val—Miss Elding. She arrived while you and Bob were bringing that last installment of mistletoe down from the hills, and she insisted on staying in her room till the guests had assembled."

"You call her Val, or Miss Elding," he said, "but I am quite sure she has been masquerading in the mountains as Bert MacLarnie."

Millicent Merton laughed, and patted her brother's mystified face.

thought the most beautiful upon which he had ever gazed.

After the dance he put a lace wrap over his partner's shoulders and led her out on the deserted porch. A full moon spilled its magic gold over the hills, lending an air of enchantment to the pleasant December night.

"Can you ever forgive my driveling idiocy in being so dumb?" he asked, pressing the little hand that lay on his arm.

"That Stanford chum of Sis's," she mimicked to perfection, "is not disposed to be harsh when the spirit of good-will is in the very air we breathe tonight."

As she looked up at the stars their eyes met. Silently he drew her to the edge of the porch where some facetious fairy had suspended a spray of mistletoe from a huge ruby lantern.

"My revenge," he whispered, pointing to the dangling spray above her red-gold head.

Then he claimed his privilege.

(THE END.)

STATE LINE PARAGRAPHS.

Editor, Rural World:—In the Home Circle, our Nettie Richmond gave a wholesome address on the subject of moral progress and welfare of the home, and the "Parent-Teachers' Association" is prominently mentioned as a means of protecting the morals of the home. Any work or society which aids in the mental and spiritual promotion of mankind is of great value. Mrs. Richmond mentions a debate at their school house, the subject of the evening being, "Which should be taught to girls in school, mathematics or domestic science?" The home virtues should be carefully taught and urged, as upon these essential elements depends the peace and happiness of the home, and the enduring of our beloved republic. A great educator and moral teacher states that our common schools have failed as a means of spiritual advancement, being too mechanical and superficial.

The Home Circle is the chief attraction of the Rural World, as it is an affair of heart-to-heart, where the good friends assemble in special session of their own. Some of the veteran members remain faithful to the department, and new members are added. How enjoyable the hours when the members were personally together, and what a large congregation.—Adela S. Cody, Nettie Richmond, Annie Hoffarth, E. B. Heaton, C. D. Lyon, Jacob Faith, and hundreds of others whose names recall and revive pleasant memories.

Here in northeast Missouri we have had an average good year, with cool and very rainy summer months. June rainfall was 10 inches, which is an excessive record. The flowers began blooming early and continued until late September. Sweet clover in profusion bloomed during a series of 14 weeks, and the blessed bees enjoyed an extra flow of sweet fluids for their mission. And how well *Apis mellifica* improved the shining hours, and what stores of white honey, delicious and delicate in flavor, the busy little golden workers stored! The swarms were large, and the members healthy and peaceful. I gave them good homes, well located and protected, and many were the hours I enjoyed in caring for the royal hosts as they went "singing in the sunlight," as the poet Longfellow so well said.—Jasper Blines, Missouri.

WHEN TO PLANT FRUITS.

Editor, Rural World:—In answer to many questions as to when is the best time to plant the different species of trees and small fruits I will say: In this climate, 100 miles south of Kansas City, late fall and during winter, when the ground is not frozen, is much the best time to plant apple, cherry, pear, plum and peach. (Evergreen trees early spring.) Thus set, the trees will get the benefit of the winter and early spring rains and make much the biggest and healthiest long lived trees.

The best time to set strawberry plants is early spring; raspberries, the "cap" varieties, in the spring when the young plants are one to two inches high. Red varieties that grow from the suckers or sprout from the roots,

like blackberries (but are not adapted to our soil), plant in late fall or early spring.

The best time to plant blackberries is late fall or early spring. Best time to plant grape vines is, like fruit trees, late fall. The best time to set rhubarb is late fall, put three to six inches manure on top; they will come through the manure in early spring; manure under the roots will kill them.—Jacob Faith, Missouri.

The Eleventh International Farm Congress, (the dry-farming congress) and Soil-Products Exposition will be

held at El Paso, Texas, in October, 1916. The offices of the congress and exposition have been removed to El Paso from Denver.

Raise calves on clean, warm, sweet, skim milk, fed regularly.

A change to the right dairy ration and proper care may make "two streams of milk flow where but one flowed before."

The concrete silo keeps silage perfectly, is almost indestructible, and may be built very cheaply where sand and gravel are available.

Farmers' Classified Department

70,000 PAID CIRCULATION

RATE ONLY TWO CENTS A WORD

Colman's Rural World has a family of over 70,000 paid in advance subscribers every week. This means that at least 350,000 farm folks are readers of these columns. Figure the cost of sending each of these readers a personal letter each week and then compare that cost with the low rate at which you can reach them ALL through the Classified Columns below. Count up the words in your advertisement, including initials and numbers which count as words, and multiply by two and you will quickly appreciate how low the cost is to reach these 70,000 buyers every week. No advertisement less than 10 cents accepted—and no fakes under any circumstances. Cash must accompany all orders.

ADDRESS,

Colman's Rural World Advertising Department 718 Lucas Av., St. Louis, Mo.

POULTRY.

Anconas.

SINGLE COMB Ancona cockerels, breeding or exhibiting. P. E. Gregoire, Newton, Illinois, Route 6.

Barred Rocks.

BARRED ROCK cockerels for sale. Frank Miller, Clarinda, Iowa.

BARRED ROCK cockerels; satisfaction guaranteed. Write for free booklet. Sunnyside Poultry Farm, Owensesville, Box 22, Mo.

Leghorns.

PURE-BRED Rose Comb White Leghorn cockerels, \$1 to \$10. Jennie Martin, Frankfort, Kan.

SINGLE COMB Buff Leghorn cockerels, \$1 each. Mrs. Nic. Faber, R. 2, Hemsen, Ia.

Orpingtons.

WHITE ORPINGTONS, single comb, some fine exhibition stock for sale at very attractive prices. W. G. Langehennig, Jackson, Mo.

Several Varieties.

FOR SALE—White Wyandotters, White Rocks, hens, pullets and cockerels. Prices, \$1.00 each. J. Wolf, Wheeler, Ill.

Turkeys.

NARRAGANSETT TURKEYS, large bone, vigorous, healthy birds; toms, \$3.50; hens, \$2.50. Mrs. R. O. Lane, R. 2, Mt. Sterling, Kentucky.

LIVE STOCK.

RED POLED BULLS for sale. P. J. Murta, Cuba, Missouri.

REGISTERED Guernsey bulls, 14 months old. Chas. Ihlenfeld, Luxembourg, Wis., R. No. 2.

BERKSHIRES, pedigreed, prolific, the big kind. Pigs, \$10 each. H. H. Shepard, Pacific, Mo.

HOLSTEINS—Registered or grades, all ages; low prices. Satisfaction guaranteed. John Lockwood, Marengo, Ia.

O. I. C. and Berkshire boars and gilts ready for service; registered, \$16.00; 10-week pigs \$6.00. Jas. Alvey, Billings, Mo.

DUROC-JERSEY HOGS, best of breeding; good individuals. Write us your wants. Price right. Wilcoxen & Porter, Bowling Green, Mo.

REGISTERED STOCK—Red Polled cattle, Berkshire hogs and White Rock poultry. Stock for sale at all times. Cedar Valley Farm, Leslie, Mo.

FOR SALE—One fine registered Holstein bull calf, seven months old; beautifully marked and excellent breeding. Price \$86. Photo free. Walter Oden, Amboy, Ind. R. 14.

DUROC-JERSEY HOGS—Bred sows, bred or born gilts; service boars; pigs, both sexes, any age, for sale. All immune. Write me your wants. Satisfaction guaranteed. Norman Porter, Bowling Green, Mo.

STEERS FOR SALE—One load of Short-horns, 650 lbs.; two loads of Herefords, 900 lbs.; one hundred head Shorthorns, 950 lbs. Know of others. Write at once, stating your wants. W. W. Dyer, Ottumwa, Ia.

FERRETS.

FERRETS—Single pairs and dozen lots. Stamp for price list. Ella Jewell, Spencer, Ohio.

DOGS, RABBITS AND PET STOCK.

FOXES WANTED—100 Reds and Greys. Ross Brown, McFall, Ala.

FOX, COON, SKUNK and rabbit hounds. broke to gun and field and guaranteed. Fox and coon hound pups, \$5.00 each. Buy your hound now and be acquainted by hunting season. Stamp for photos. H. G. Lyle, Fredericksburg, O.

FARMS AND LANDS.

CALIFORNIA FARMS for sale; write for information. E. R. Waite, Shawnee, Okla.

MUST SELL, 240 acres all bottom land, well imp. Young's Realty Co., Howard, Kan.

BEST BARGAINS in Eastern Kansas, 120 farms for sale. Write what you want first letter. G. W. Depue, Parker, Kansas.

1,800 ACRES coal, oil, farming, pasture land and leases, \$3 to \$15 per acre. No trades. John Cavanagh, McAlester, Okla.

SACRAMENTO VALLEY, CALIFORNIA, improved farm for sale. Terms. Write, E. R. Waite, Shawnee, Okla.

FOR SALE—Good Southwestern Oklahoma improved; corn, wheat, cotton and alfalfa farms; easy terms; bumper crops; some exchanges. Box 385, Mangum, Ok.

YOU CAN GET free ranch in South America by assisting in paying expenses to secure million acre concession. Rich soil, fine climate. Highest references. Map 26c. Box 498, Sawtelle, Calif.

HOMES FOR HOMELESS. We sell farms on your terms. You share in profits of company. Send for free literature. Florida Farm and Home Company, Johnstown, Florida, Dept. C. Agents wanted.

THE BEST 30-acre farm in Fannin Co., 6 miles from Bonham, on public road. Have good improvements. Orchard and lots of water. No waste land. \$75 per acre. J. T. Owens, Bonham, Tex. R. 2.

KUDZA; great new perennial legume hay, grow like cowpeas, but last ten years, three cuttings; day to cure; shed no leaves. Richest feed; fed green or dry. Highly recommended. Pamphlet free. Kudza Farms, Semmes, Alabama.

FARMS, STOCK RANCHES, grazing and unimproved land, fruit and garden tracts, for sale, trade or rent; request free list; United States or Canada; mention requirements and location preferred; register your unsold property. 629 Farmers' Exchange, Denver, Colorado.

SWEET CLOVER, white and mammoth yellow. Write, Mrs. J. T. Mardis, Falmouth, Ky., R. 4.

HELP WANTED.

WISH TO HEAR at once from reliable single man, capable of managing large ranch successfully. Mrs. Ward, Box 267, Valley, Nebr.

NOTICE—NOTICE—15,000 men and women will get U. S. Government jobs this year. \$75.00 month. Vacations. No layoffs. Short hours. Common education sufficient. "Pull" unnecessary. Write immediately for free list of positions now obtainable. Franklin Institute, Dep't. E 167, Rochester, N. Y.

AGENTS.

AGENTS WANTED everywhere. Peyton Nurseries, Booneville, Mo.

WANTED—Man to sell trees, shrubs, roses, berry bushes. Permanent. Brown Brothers Nurseries, Rochester, N. Y.

BEES AND HONEY.

HONEY—Pure extracted—2 cans of 60 lbs. each, light amber, \$8.50. Amber, \$8.50. Also bees. John Ruyts, Carlsbad, N. Mex.

MISCELLANEOUS.

SEND \$1.00 FOR RECIPE to cure wind-broken horses to Box 251, Bamberg, S. C.

FINE CHEWING and smoking tobacco. Three years old. Send stamp for samples. W. L. Parks Tobacco Co., Adams, Tenn.

XMAS PERFUME, regular thirty-five-cent bottle for fifteen cents. Harry Hockman, Wakeeney, Kans.

THE SMALLEST Bible on earth! Size of postage stamp. New Testament. Illustrations: 300 pages. Sample 15¢, per dozen 25¢. Agents wanted. The biggest wonder of the Twentieth Century. Order a dozen for Xmas gifts. Weber Dist. Co., 1540 Orchard St., Chicago.



33-Piece
Dinner Set
AND
41 Extra
Articles

74
Articles
FREE

Every Reader

remains the same. Don't let this opportunity pass or you will regret it when it is too late. Now is the time.

Description

This magnificent 33-piece dinner set is the product of one of the finest and largest potteries in the world, the old rose and gold leaf design having become famous in aristocratic homes.

In the center of each piece there is a cluster of roses depicted in their natural colors and surrounded by the brilliant green foliage so that almost the only thing missing is the fragrance. The rich gold leaf border on the edge of each dish adds greatly to the beauty of the old roses, and makes this a valuable and beautiful dinner set.

World Renowned

Each dish bears the genuine stamp and TRADE MARK of the great world-renowned Owen China Company of Minerva, Ohio. This stamp guarantees the high superior quality of this set of dishes, guaranteeing them absolutely. It proves to you that this is the original Owen chinaware. Oh, if you were only able to see the dishes themselves, the rich deep red of the old roses, which is burned into the ware itself so deep that it won't wear off, no matter how much or how long you use the dishes.

Each set is complete and comes nicely packed in a neat box and is shipped to you by express. We will guarantee, no matter how many dishes you may have that you will prize this set above all others that you may possess.

Thousands Write Us Like This

BETTER THAN SHE EXPECTED.

The 33-piece dinner set has been received O. K. It is the prettiest dinner set I ever saw—it is just grand. All of my neighbors who have seen the dinner set want to get a set just like mine.—S. M. McKeithen, Cameron, N. C.

WIFE TOO ELATED TO WRITE.

Lettie Travis (my wife) is too much elated over her dishes just received from you to write, so I write for her. They are far more beautiful and much better ware than she expected. Please accept our thanks for same.—Keisie Travis, Harrison, Kentucky.

ALL O. K.

I received my dishes, post cards and extra surprise all O. K., and they are simply fine.—Meta Reiter, Wheatley, Ark.

There is hardly a reader of this wonderful offer who cannot secure one of these beautiful 33-piece dinner sets and secure it within a few days after sending name for instructions.

Big Free Offer

41 Extra Articles **FREE**

115 High-Grade Needles



Fill out the coupon below and send it in to us and we will send you a sample of our famous needlecase, containing an assortment of 115 needles for every purpose, including bodkin, darning, etc.

When you get the sample needlecase we want you to show it to 16 of your friends and neighbors, and tell them about a very special offer whereby each person you see can get a needlecase just like yours, free.

As soon as we get the coupon below with your name and address on it we will lay aside one of these handsome sets of dishes, and the 41 extra articles, and send you the big sample needlecase, together with full instructions and everything necessary to make the little work easy for you, so that as soon as you finish your work we can send you the 33-piece dinner set and the 41 Extra Articles by express without a minute's delay. An offer could not be more liberal or more fair and we know you will be delighted.

I also include with each set of dishes my special plan for paying all express charges on the dishes. My whole plan is so simple you can't fail to earn a set of these dishes if you will only make up your mind to do so.

The 33-piece dinner set is not all yet get by any means. The truth of the matter is there is so much to tell about this big new gift plan of ours that we cannot get it all in this space. It is full of SURPRISES and DELIGHTS for those of our friends who are willing to lend us a helping hand at spare times.

A Surprise

The very first letter you get from us will surprise you before you open it. It will also delight you by telling all about the big collection of rare and beautiful post cards which we want to give you in addition to the dishes.

Another Surprise

And still, THAT is not all. One of the prettiest surprises of all is kept a secret until the day you get the dishes and find a pretty present that you knew nothing about. Isn't this a fascinating idea? And what makes it even more interesting is that we have something nice for everyone of your friends and neighbors, too. We'll tell you ALL about it as soon as we receive the coupon with your name on it.

JUST SEND YOUR NAME

The coupon starts the whole thing. Just send me your name and address. I don't ask you to send any postage or anything else—just the coupon. So hurry up and send it in.

When you get the beautiful dishes, 49 post cards, and the extra surprise premium you will say, "How can you afford to give such beautiful premiums for such little work?" Never mind now HOW I am able to give these valuable gifts, on such a very, very easy plan, the fact remains that I DO give them only to my friends who are willing to lend me a helping hand during their spare time.

SIGN THE COUPON—IT STARTS EVERYTHING.

Send No Money
Colman's Rural World,

St. Louis, Mo.

I want to get a 33-piece dinner set and the 41 extra gifts. Send me the big sample needlecase, and tell me all about your big offer.

Name
P. O.

R. F. D. REDACTED State.

SHEEP & SWINE FOR MOST MONEY

BUTCHERING HOGS ON THE FARM, KILLING AND DRESSING.

Butcher hogs at home.

Give them water but no feed for a day before killing.

Bleed the hog with an eight-inch straight-bladed knife.

Be sure bleeding is done before scalding or the skin may be left too red.

A heavy blow with an axe between the eyes will stun the animal before sticking.

The meat may spoil if the animal is excited before killing, or the weather is warm afterwards.

Scrape as quickly and rapidly as possible after scalding. The cold carcass is hard to scrape well.

Bleeding will be finished more quickly if the animal lies on a steep slope with its head down hill.

Keep the hog moving in the barrel. If the animal is left pressed against the barrel the hot water cannot get at that part of the carcass.

Scraping is easier if a shovelful of hardwood ashes, a lump of lime, some concentrated lye, or a handful of soft soap has been added to the water.

Use a thermometer. Do not attempt to scald with the water at above 150 degrees. A good scald can be obtained at 140 degrees but it takes longer.

In opening the carcass, split the pelvic bone between the hams with a knife by cutting exactly in the center. To open the breastbone with a knife, cut a little to one side of the center, but do not let the point of the knife get behind a rib.

These methods are used at the Missouri College of Agriculture where students are taught the principles and practice of home butchering and curing. There is nothing to prevent the farmer from having the best without the extravagance of big store bills for salt pork. Both he and the stoekeeper will profit if he cures meat for his own table and uses the money saved to buy things he wouldn't otherwise get.

TO TELL A SHEEP'S AGE BY THE TEETH.

A lamb has eight small first-teeth on the lower jaw. When the animal reaches the age of about one year, the middle pair are replaced by two permanent teeth; at the age of about two, the teeth on either side of these permanent teeth, are also replaced with a permanent pair; at the age of three, the next tooth on either side gives way to a permanent tooth; and at about the age of four, the last or back teeth are replaced in like manner.

Briefly then, a sheep with one pair of permanent teeth is a yearling; a sheep with two pairs is a two-year-old; with three pairs, a three-year-old; and with four pairs, a four-year-old.

After a sheep is four years old, one cannot tell by the teeth about the age. However, one who is purchasing a sheep, says T. G. Paterson, of the University of Minnesota, should see to it that it has not lost any teeth, or that the teeth have not become long and shoe-peggy in appearance.

This is a time to separate the flock. The wethers should be put by themselves and given extra feed to fit them for market. Any lambs that require extra feeding may be put with them.

No animal is profitable when standing still in condition. There is profit in growth. A mere maintenance system of feeding is a losing game.

When pastures are short feed grain to the sheep in troughs in the pastures. Feed regularly. A very small quantity of grain given daily and regularly often turns the scale from loss to profit.

